REPORT RESUMES

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RESOURCES OF CANADIAN ACADEMIC AND RESEARCH LIBRARIES.
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ALTHOUGH IT EMPHASIZES ACADEMIC LIBRARIES, THIS STUDY ALSO INCLUDES THE NATIONAL AND PROVINCIAL LIBRARIES, LARGE PUBLIC LIBRARIES, AND SPECIAL LIBRARIES THAT SERVE CANADIAN SCHOLARS, STUDENTS, AND RESEARCH WORKERS. WITH THE DATA OBTAINED FROM A QUESTIONNAIRE ON LIBRARY STATISTICS AND HOLDINGS, VISITS TO THE LIBRARIES, INTERVIEWS WITH LIBRARIANS AND UNIVERSITY ADMINISTRATIVE PERSONNEL, AND A POLL OF FACULTY AND STUDENT OPINIONS ON LIBRARY SERVICES, FOUR MAJOR AREAS WERE COVERED IN THE SURVEY--RESOURCES, TECHNIQUES, SERVICE, AND ADMINISTRATION AND FINANCE. THE CENTRAL FOCUS OF THE STUDY IS THE RAPID INCREASE IN STUDENT POPULATION, ACCOMPANIED BY INCREASE IN FACULTY, THE "INFORMATION EXPLOSION," NEW TECHNOLOGY, RISING PUBLISHING RATE, SHORTAGE OF PROFESSIONAL LIBRARIANS, INADEQUATE LIBRARY BUILDINGS, CHANGES IN INSTRUCTIONAL METHODS, AND NEW EMPHASIS ON RESEARCH. THE SURVEY REVEALS THAT NEVER BEFORE HAVE CANADIAN LIBRARIES RECEIVED THE ATTENTION AND SUPPORT NOW ACCORDED THEM, BUT SUCCESSFUL LIBRARY PERFORMANCE WILL REQUIRE MUCH PROGRESS AND GENERAL IMPROVEMENT. RECOMMENDATIONS FOR CONSTRUCTIVE ACTION INVOLVE THE AREAS OF WRITTEN POLICY STATEMENTS, CENTRALIZATION, SUBJECT SPECIALISTS, BOOK SELECTION TOOLS AND ORDER PROCEDURES, STRONG REFERENCE SYSTEMS, THE NATIONAL UNION CATALOGUE, PHOTOCOPYING FACILITIES, BUILDINGS PLANNED FOR THE FUTURE, ACADEMIC STATUS FOR PROFESSIONAL LIBRARIANS, LIBRARY AUTOMATION AND MECHANIZATION, COOPERATION, SUSTAINED AND INCREASED FINANCIAL SUPPORT, AND IMPROVEMENT OF RESOURCES TO MEET CANADIAN ASSOCIATION OF COLLEGE AND UNIVERSITY LIBRARIES (CACUL) STANDARDS. A SUBJECT LIST OF SPECIAL COLLECTIONS IN CANADIAN LIBRARIES, A 132-ITEM BIBLIOGRAPHY, AND THE CHECKLISTS OF REFERENCE BOOKS AND PERIODICALS USED FOR THE SURVEY ARE APPENDED. THIS STUDY WAS SUPPORTED BY THE CANADA COUNCIL AND THE COUNCIL ON LIBRARY RESOURCES AND IS AVAILABLE FOR $5.00 FROM THE ASSOCIATION OF UNIVERSITIES AND COLLEGES OF CANADA, 151 SLATER STREET, OTTAWA 4, CANADA. (JB)

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RESOURCES OF CANADIAN ACADEMIC AND RESEARCH LIBRARIES

ROBERT B. DOWNS
Dean of Library Administration
University of Illinois

Ottawa
Association of Universities and Colleges of Canada
1967

ROBERT B. DOWNS

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Resources of Canadian Academic and Research Libraries

ROBERT B. DOWNS
Dean of Library Administration
University of Illinois

Ottawa
Association of Universities and Colleges of Canada
1967

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Foreword

THE PRESENT STUDY of Canadian library resources is a culmination of the interests and efforts of numerous persons. The original inspiration for the undertaking came from the Canadian Association of College and University Libraries, a section of the Canadian Library Association. The Association of Universities and Colleges of Canada, in turn, endorsed and agreed to sponsor the proposal. Essential financial support followed from the Canada Council and the Council on Library Resources, Washington, D.C.

Every encouragement from beginning to end for the survey has come from Dr. Geoffrey C. Andrew, Executive Director of the Association of Universities and Colleges of Canada, and from Dr. Robert H. Blackburn, University of Toronto, Chairman of the Steering Committee, representing the AUCC and CACUL.

The principal guidelines for the study were drawn up by the Steering Committee representing the two sponsoring organizations. My able, hardworking, and versatile colleagues on the survey staff appointed by the Steering Committee assisted in the preparation of the detailed questionnaire forms and were responsible for gathering the mass of data required for the investigation. The members visited personally all of the university and many of the college, federal, public, and special libraries selected for inclusion, in order to make firsthand observations and to verify information supplied by individual institutions. The emphasis, however, was on visits to university libraries. The regular survey staff was composed of the following:

Paul-Emile Filion, S.J., Librarian, Laurentian University of Sudbury
Bruce B. Peel, Librarian, University of Alberta, Edmonton
Peter Russell, Professor of Political Economy, University of Toronto

In addition three members joined the team for special assignments:

Bernard Vinet, Counselor to Director on Collections, Bibliothèque de l'Université Laval; and

Lucien W. White, Director, Public Service Departments, University of Illinois, for the French-speaking institutions of Canada

Jerrold Orne, Librarian, University of North Carolina, for the Maritime Provinces

Grateful appreciation should be expressed to the hundreds of chief librarians and library staff members whose co-operation in completing the questionnaire forms and supplying other data was indispensable to the success of the enterprise. An important aspect of the study — a poll of faculty and student opinions on library service — depended upon the aid of several thousand individuals in institutions all across Canada.

Members of the study team were hospitably received by — in addition to librarians — presidents, vice-presidents, deans, faculty library committees, and other key persons in the universities. Such personal interviews were valuable from several standpoints: to provide the study team with additional information and administrative views on library matters, to answer questions about the purpose and scope of the project, and to acquaint the educational community in general with the special problems of academic libraries.

The work of the study team was facilitated at all stages by the AUCC staff in Ottawa, who assumed responsibility for reproducing, distributing and retrieving forms, assembling published material, arranging schedules, and carrying on extensive correspondence. Special thanks should be extended to E. Les. Fowlie, AUCC Librarian, when the study began, and to his successor, Richard Greene.

Finally, we are indebted to Robert F. Delzell and Clarabelle Gunning, both of the University of Illinois Library staff, the first for analyzing in detail the mass of faculty and student questionnaires, and the second for the arduous and difficult task of preparing the survey report for reproduction.

The questionnaire forms and other voluminous data assembled by the project have been placed on file in the Library of the Association of Universities and Colleges of Canada at Ottawa.

ROBERT B. DOWNS

September 1, 1967

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Summary of Recommendations

UNDER VARIOUS SECTIONS of the following report on the resources of Canadian libraries there are proposals, recommendations, and suggestions for constructive actions that should, if properly implemented, make important contributions to the effectiveness, general improvement, and progress of library services for scholars, students, and research workers throughout the nation.

A basic factor in any consideration of the role of libraries in Canadian higher education — the central focus of the present study — is the mounting tide of student enrolment. The crest of the wave is still years ahead. Paralleling the increase in the student population are the doubling and tripling of faculties and staffs in many institutions, the creation of new departments of study and research, a startling "information explosion" in most major fields, the emergence of revolutionary new technologies, and a general age of change.

The pressures resulting from the extraordinary growth in higher education have nowhere been felt more strongly than in the college and university libraries. The rate of book and periodical publishing has been rising rapidly, accompanied by inflationary prices. An acute shortage of professional librarians throughout the country has made it difficult to add to, or even to maintain, existing library staffs. Library buildings less than a decade old are frequently being found inadequate in their provision of space for old and new types of library service or to accommodate the increasing numbers of students, faculty, and staff members. At the same time, changing methods of instruction are sending students to their libraries in hordes, and there is more pressure on faculty members to do research and writing, requiring access to good libraries.

Perhaps because of such considerations as the foregoing, libraries have suddenly become fashionable, in the best sense of the word. In the past every college and university has had to have a library of sorts, but if it met the minimum requirements of accrediting associations, only the librarians and a few enlightened faculty members were concerned. Now, all that has changed. The present attitude is well stated in the American Council on Education's report, *An Assessment of Quality in Graduate Education,* which comments: "The library is the heart of the university; no other single nonhuman factor is as closely related to the quality of graduate education . . . institutions that are strong in all areas invariably have major national research libraries."

In any event, never before in their history have Canadian university libraries received the attention and support which have lately been accorded them. But utopia for them is still far from being just around the corner. The recommendations which follow are designed to strengthen them in a variety of ways, in order that they may continue, and if possible accelerate, their recent progress.

The numbered references in parentheses at the end of each of the recommendations which follow are to the main text, where more extended comments and explanations may be found. At the end of chapters, there are also summaries of discussions. The recommendations apply primarily to university libraries. In most instances the Canadian Association of College and University Libraries will be the logical agency to work toward their implementation, though frequently in co-operation with other organizations, such as the Association of Universities and Colleges of Canada.

I. ADMINISTRATIVE ORGANIZATION

1. Every university library should have a written policy statement or statutes describing the relationship of the librarian to the general administration, defining the library's resources, centralizing authority for library administration, stating the duties of the librarian, providing for a faculty advisory committee, and placing the library staff in its proper professional setting in the university organization. (p. 39-51).
2. For economy, efficiency, and effective service, library administration should be centralized. Whether its resources are in one or many locations, the library's materials should be procured centrally, catalogued centrally, recorded in a central catalogue, and be considered the property of the university, and any departmental or divisional libraries and librarians should belong to the central library organization. (p. 51-53).
3. Excessive proliferation of departmental libraries and the scattering of library resources should be avoided. If decentralization is essential, large divisional libraries are preferable to small departmental collections. The advantages of departmental libraries can be obtained through placing small working collections in laboratories and offices, providing frequent delivery service, ensuring maximum mobility of library re-

sources, and making photocopying services freely available. (p. 53-57).

II. TECHNICAL SERVICES

1. A corps of subject specialists on the library staff, specially trained as book selection experts, should work closely with the faculty in developing the library's resources. (p. 60-62).
2. Book selection tools, particularly designed to be used in Canadian libraries, should be created, probably as an AUCC-CACUL undertaking. (p. 66-67).
3. Because of the peculiar difficulties under which Canadian libraries operate for book procurement, greater reliance on well-planned, carefully controlled standing orders is recommended. (p. 63-64).
4. A comprehensive investigation, in co-operation with publishers and dealers, should be undertaken by the Canadian Association of College and University Libraries to find ways and means of acquiring library materials more promptly and economically than is possible with the present laissez-faire methods. (p. 64-66).

III. READERS' SERVICES

1. Every university library should develop strong reference, research and circulation systems for its students and faculty. Some features of such services are these: (a) a minimum circulation of 50 books per year per student; (b) a preponderance of home use over reserve book circulation; (c) thorough instruction for students in the use of books and libraries; (d) encouragement of independent study and research; (e) generous schedule of library hours; (f) reasonable regulation of faculty loans to prevent abuses; (g) an efficient delivery service linking libraries, laboratories, and offices; (h) library handbooks and acquisition lists to publicize library resources and services. (p. 81-92).
2. More complete recording of library holdings should be entered in the National Union Catalogue and in union lists to help distribute interlibrary loans more widely. The institutions presently bearing the chief burden of such loans should be properly compensated financially. (p. 88-89).
3. Every college and university library should establish efficient photocopying facilities, to serve its students and faculty, to add to its resources, and for interlibrary loans. (p. 91).

IV. PHYSICAL FACILITIES

1. Any library buildings currently in the planning stage should programme for the future as well as for the present. Too many university library structures of the past decade are already outgrown. As far as it is practicable to project future student enrolments, the growth of faculties and library staffs, and the expansion of book collections, planning for new buildings should look at least two decades ahead, either for immediate construction or for added phases to increase their capacity. (p. 93-105).
2. Building standards for the guidance of librarians and university administrators should be established and agreed upon for all important aspects, e.g.: book, reader, and staff space required, lighting and air conditioning, and building materials. (p. 104-105).
3. Further studies by CACUL should be made of various types of library buildings, college and university, large and small, and present standards revised, in co-operation with the AUCC Planning and Building Committee. (p. 105).

V. PERSONNEL

To help raise the standards for personnel to staff the university and college libraries of Canada, and to correct the gap between supply and demand, the following measures are recommended:

1. Recognize professional librarians as key members of the academic community, requiring high standards for their appointment and according them all the perquisites of faculty status. (p. 107, 110-116).
2. The co-operation of the Canadian Association of University Teachers should be enlisted to aid in obtaining academic status for professional librarians. (p. 116, 125).
3. Make a clear separation of clerical and professional duties in libraries to free the professional librarians to carry on higher-level tasks; in institutions where the classification does not now exist, create a category of library technical assistant or subprofessional librarian to carry on duties requiring specialized technical training. (p. 111-113).
4. Provide a two-ninths supplement to the salaries of librarians on 11-month appointments in recognition of the requirement for year-round service. (p. 118, 125).
5. Alleviate problem of excessive turnover in clerical and subprofessional personnel by improving salaries, providing bet-

ter working conditions, giving opportunities for advancement, and establishing in-service training programmes. (p. 123-124).

6. Nonaccredited existing graduate library schools, new schools in process of being established, and any schools to be found in future should work toward full accreditation as rapidly as possible; more training programmes for library technicians at the undergraduate level are also needed. (p. 124).

VI. FACULTY AND STUDENT VIEWS ON LIBRARY SERVICE

Librarians should give the most thoughtful consideration to the constructive criticisms, suggestions, and recommendations emanating from the thousands of faculty members and students who responded to the inquiries submitted to them concerning library services. (p. 127-145).

VII. LIBRARY AUTOMATION AND MECHANIZATION

1. Developments in data processing have made feasible the concept of national and international library networks, offering new approaches to problems of gathering and retrieving certain types of information. Full advantage of these possibilities, as they are perfected, should be taken by Canadian university and other research libraries. (p. 158-159).
2. The potentials of telefacsimile transmission systems should be closely followed by research-type libraries and as devices become more efficient in operation and more economical in cost be utilized to expedite the rapid exchange of materials between libraries. (p. 155-157).
3. Immediately feasible are the application of certain types of automation and mechanization to library technical procedures, such as acquisition records, serials files, and circulation routines. (p. 149-155).
4. The extensive activity currently in progress among Canadian libraries in the field of library automation should be coordinated by the CLA Mechanization Committee to avoid duplication of experiments, to assure compatibility of equipment, of systems designs, and programming; a first essential is an effective medium of communication among these libraries. (p. 160).

VIII. LIBRARY CO-OPERATION AND INTERRELATIONSHIPS

1. Expansion and further development of the varied co-operative programmes in which Canadian libraries are presently en-

gaged are desirable and feasible, except perhaps regional union catalogues and local union lists. (p. 163-182).

2. Both the limitations and values of library co-operation should be recognized. The primary purposes ought to be the enrichment of resources and the improvement of library services rather than economy. (p. 163-164).
3. The National Library and the National Science Library should exercise vigorous leadership in such programmes as completion of the National Union Catalogue and national union lists of serials, establishment of a national communications network among research libraries, provision of bibliographical services, and co-ordination of collecting activities. Toward these ends, the creation of an Office of Canadian Library Resources in the National Library, recommended by Williams in 1962, is reiterated here. (p. 164-167).
4. Adoption of a modified Farmington Plan, under the auspices of the proposed Office of Canadian Library Resources or other suitable agency, is recommended for Canadian university and other research libraries, concentrating on Europe and other areas of particular concern to scholars, research workers, and advanced students in Canada. (p. 177).
5. Canadian libraries should participate in and take full advantage of the international programme of co-operative cataloguing in process of development. (p. 177-178).
6. The selection among universities of areas of strength for research and graduate study and a consequent sharing of library resources on a local, regional, and national basis should be encouraged in all desirable and practicable ways. (p. 176).

IX. FINANCIAL SUPPORT

1. Sustained financial support over a period of years is essential to the growth of strong libraries in Canadian universities; additional appropriations totaling $150,000,000 for collection development will be required over the next decade, beyond present budget allotments and the current rate of annual increases, for retrospective collecting, if these libraries are to reach a stage of development comparable to the leading American university libraries. (p. 204).
2. The CACUL recommendation of a minimum of 10 percent of the total educational and general expenditures for library

support should continue to be each institution's goal for well-established libraries, and considerably higher for new institutions. In no case should a college or university provide less than $150 per year for library maintenance for each full-time student. (p. 186, 194).

3. Further analyses of book-salary-general expense ratios should be made of individual library budgets to determine whether one or more categories are disproportionately low or high. (p. 194-196).
4. Special grants for catch-up purposes are recommended for new university libraries and for older libraries which have received substandard support in the past. (p. 200-202).
5. Provincial governments, through which both federal and provincial contributions to the operating costs of higher education are channeled, and which have a constitutional responsibility for all forms of higher education, will need to be kept fully informed not only of the overall requirements of the universities but of the specific problems of library development. (p. 201, 204-205).
6. Special grants from the Canada Council should be continued and increased for the building up of research collections in university libraries. Such funds should be concentrated in a limited number of institutions, looking toward the co-ordinated growth of a great national resource available to the faculties and students of all universities and colleges. Intensive and extensive development of a relatively small number of major research library centres will pay greater dividends, from the point of view of the scholar and research worker, than spreading funds available for research types of materials thinly over a large number of institutions. (p. 201-203).
7. University libraries should receive a reasonable percentage of overhead costs usually allowed in research contracts with government and industry. (p. 203).

X. Resources for Study and Research

1. Every Canadian university, as distinct from college, library which now falls below the CACUL standards of 75 volumes per capita of student enrolment, with less than 1,000 current periodicals, and a minimum total collection of 100,000 volumes, should aim to reach these levels as rapidly as possible. (p. 209-211, 217-218, 224).

2. Even the smallest universities should acquire currently a minimum of 5,000 volumes per year, and the larger institutions not less than five volumes per capita of student enrolment annually. (p. 213-214).
3. Standard lists of recommended periodicals, reference books, and other materials should be checked by libraries to identify and correct deficiencies in their basic holdings. (p. 219-223).
4. Libraries which have acquired important and distinctive specialized collections, such as many of those described in the chapter on "Specialized Collections in Canadian Libraries," should be encouraged and assisted in their further development, particularly if these resources can be fitted into an overall national pattern or programme. (p. 225-267).

1. Background

IT IS HIGHLY appropriate that during Canada's centennial celebration, some special attention should be focused on one of her most important resources—the nation's libraries, and in particular the college, university, and research libraries, because of their great significance for Canada's future growth and development.

A phenomenal growth is in progress in the Canadian world of higher education, marked by rapidly expanding student enrolments, proliferating graduate and research programmes, new physical plants, more generous budgets, and other evidences of popular support and recognition. The projections on future enrolments, building needs, and financial requirements are little short of astronomical. It is highly gratifying to note that in virtually all institutions libraries are sharing in, and in fact are often in the forefront of, the upsurge in Canadian higher education.

The proposal for a comprehensive investigation of academic libraries in Canada originated with the Canadian Association of College and University Libraries and was promptly endorsed and supported by the Association of Universities and Colleges of Canada. Several justifications were offered in presenting the proposal: the urgent need for increased operating and capital budgets for the libraries, the possible application of automation to research libraries, the lack of information concerning academic library organization and practices, the need to develop criteria for judging the adequacy of library collections, and the desire for more information on the resources and needs of libraries, to guide government and fund-raising agencies.

Terms of Reference

At the outset, it was agreed that four major areas should be covered in the study of libraries. The first relates to resources—books, periodicals, manuscripts, archives, newspapers, government publications, and other materials—particularly at the level of advanced study and research. Allied closely to the availability and accessibility of collections is the broad subject of co-operation and integration, comprising such activities as union catalogues and union lists, divisions of acquisition, specialization of collections, interlibrary loan practices, centralized processing, and joint storage operations.

The second area deals with techniques, directing attention to machine methods for expediting and facilitating cataloguing, acquisition work, bibliographic searching, and similar aspects of technical operations. More in the future are library applications of automation in communication systems, such as data processing, information accumulation, storage and retrieval, and high speed communication.

Area three is service and administration, concerned with various factors that influence service to undergraduate and graduate students at all levels, faculty members, research scholars, and others who may have a claim on library facilities. There are two specific categories. One is library personnel, involving library schools and other training agencies, the adequacy of the supply of librarians, and the effectiveness with which available personnel is being utilized, both professional and non-professional. Second is library space, analyzing the availability of space for books, readers, and staff in terms of effective operation.

The fourth major area is finance, including such aspects as library expenditures in relation to total institutional expenditures, the relationship between expenditures for books and salaries, sources of financial support, and expenditures for operating and capital purposes.

Two principal methods were used for assembling information: questionnaires and visits to individual institutions. The questionnaire forms were in the following parts: (1) a comprehensive form on enrolment, statistics on holdings, financial support, use of the library, personnel, physical facilities, general administration, cataloguing and classification, library co-operation, acquisition programmes, etc.; (2) a questionnaire to college and university faculty members, soliciting their attitudes and views toward the library; (3) a similar questionnaire addressed to students; (4) a guide for the description of research materials held by the library; (5) five checklists to evaluate holdings: (a) basic reference collection, (b) reference books of special Canadian interest, (c) current periodicals in the humanities and social sciences, (d) periodicals of special Canadian interest, (e) French-language periodicals.

Over a three-month period, February-April 1967, members of the study committee visited all the university and most of the college libraries and a number of nonacademic libraries to make first-hand inspections and to obtain additional information. During this period numerous presidents, vice-presidents, deans, faculty library committees, librarians, and other key individuals were interviewed, complementing in many particulars the data gathered by the questionnaire method.

Originally, the plan of the study was limited to academic libraries, the basic group being all members of the Association of Universities and Colleges of Canada and other degree-granting institutions in the country. It was recognized, however, that scholars and students want to utilize library resources wherever they may be found and make extensive use of other types of libraries than the purely academic. Because of the significance of their resources for the survey's purposes, the study was extended to include the collections of national and provincial libraries, large public libraries, and special libraries in such professional fields as medicine, law, art, and business. These data are reported in the chapter dealing with "Specialized Collections in Canadian Libraries" and in the bibliographical appendix recording published checklists, union lists, guides, calendars, and similar descriptive material.

Previous Studies and Surveys

It is little wonder that Canadian librarians are becoming satiated with, even allergic to surveys. Within recent years, they and their institutions have been subjected to a barrage of inspections, questionnaires, analyses, and studies, sometimes repetitious in character and the findings perhaps of doubtful utility. The librarians are to be commended, therefore, for their forbearance, patience, and spirit of co-operation in being willing to submit to yet another investigation.

For historical background and to provide perspective for the present undertaking, a review of the principal reports growing out of previous studies seems desirable. The range has been from intensive surveys of individual libraries to others provincial and national in scope. The following summaries will follow a more or less chronological order. Two limitations should be noted: (a) if a report is general in nature, e.g., The Humanities Research Council of Canada's *The Humanities in Canada,* only the library aspects will be discussed; and (b) if a report deals with libraries of various types, only academic libraries will be considered.

1. *The Humanities in Canada,* by Watson Kirkconnell and A. S. P. Woodhouse (1947), report of a survey of "the state of the humanities in Canada," begun in 1944 under the sponsorship of the Humanities Research Council of Canada. Detailed comparisons, strictly on a quantitative basis, were made between academic libraries in the United States and Canada. Among 80 American university libraries holding more than 200,000 volumes, only four Canadian institutions—Toronto, McGill, Laval, and Queen's—were listed, and none of them were among the top 35. Of Canada's remaining universities and colleges, 41 recorded library holdings between 20,000 and 168,871 volumes, and more than 100 other

academic libraries possessed less than 20,000 volumes. "All in all," Messrs. Kirkconnell and Woodhouse concluded, "the general picture of university and college libraries in Canada is not a happy one". The resources of public and governmental libraries were described as equally scanty. The existing collections were heavily concentrated in four centres —Toronto, Ottawa, Montreal, and Quebec.

Quality was more difficult to measure than quantity, Kirkconnell and Woodhouse conceded, but they found considerable strength in English and French literature, more modest holdings for other western European languages and classical literature, and a good representation of theology and history of religion, music and fine arts, and Canadiana, though the concentration in a limited number of libraries again was evident. The surveyors deplored "the isolated fragmentation of our resources," and strongly recommended the creation of a union catalogue of the holdings of all Canadian libraries and establishment of a national library. Better correlation could also be obtained, it was suggested, by greater use of interlibrary loans and photographic copies. Summing up, it was emphasized that "until some national integration of library knowledge has been secured, the Canadian researcher in the humanities will continue, so far as Canadian resources are concerned, to flounder in an undrained swamp".

2. *Resources of Canadian University Libraries for Research in the Humanities and Social Sciences; Report of a Survey for the National Conference of Canadian Universities and Colleges,* by Edwin E. Williams (1962). In its impact on administrators, faculty members, and librarians, the Williams report has probably exerted the greatest influence of any academic library investigation to date. After a preliminary statement on the scope of the survey and the procedures followed, a general review follows of "where Canadian university libraries are today and where they appear to be going," noting their geographical situation, their present stage of development, and problems confronting them, such as complications caused by growth. A major division of the report is devoted to "The Research Collections" in the humanities and social sciences, consisting of a comparative summary of the holdings for research purposes of 14 college and university libraries. The basis is a test list of periodicals in 24 fields and of monographic material in 34 areas (excluding Canadiana and the professions). The chapter ends with a discussion of subject fields in which no resources for graduate study were found. "Any recapitulation of strong points in Canadian research collections soon makes it evident that, except in Canadian subjects and in medieval studies, there are no collections in major fields that are outstanding as a whole—assuming

that an outstanding collection is one strong enough to attract scholars from other countries," Williams concluded.

The fourth and last chapter of the Williams study is entitled "The Improvement of Library Resources". Specific recommendations include the completion of the National Union Catalogue, the preparation of a union list of serials in the humanities and social sciences, specialization within certain limits in collection development, building up in the National Library of strong collections of bibliography and government publications, and creation of an Office of Canadian Library Resources to gather and disseminate current, accurate information about research collections and to aid in developing collections throughout the country.

3. *Research in the Humanities and in the Social Sciences in Canada,* by Bernard Ostry, published by the Humanities Research Council of Canada and the Social Science Research Council of Canada (1962). This is the first report of what was intended to be an annual survey of Canadian research problems and needs in the humanities and social sciences. The existing library resources were again painted in dark colors, e.g., "present university library budgets are insufficient in at least 75% of the universities to meet undergraduate needs, to say nothing of post-graduate requirements . . . The annual rate of increase of accessions is not great enough in most institutions to do more than maintain, rather than improve, the quality of holdings in any subject".

Suggested remedies included the following: (a) a grant of $50,000,000 from the Federal Government to the Canada Council "to be used exclusively to improve the quality of university libraries by the purchase of books," and a grant of $25,000,000 to be used for new buildings, additions to buildings, and research aids, such as microfilm readers; (b) a grant of $200,000 from the Federal Government to the National Library to purchase Xerox machines to be used for universities requesting copies of source materials and rare books; (c) establishment by HRCC and SSRCC of a national fund for the purchase of important collections and source materials; (d) appointment of a committee to consider the possibility of specialization among universities in agreed areas or disciplines; (e) and the designation of some 10 university libraries in different regions of Canada as depositories for all government publications.

4. *The Humanities in Canada; a Report Prepared for the Humanities Research Council of Canada,* by F. E. L. Priestley (1964). The author contrasts in detail the remarkable advances which occurred in Canadian university libraries from 1946 to 1962. Library buildings, for example, had been found highly inadequate by Kirkconnell and Woodhouse, with few exceptions, but Priestley reported that "new and better library

buildings are to be found in almost every university in Canada, thanks to a $50,000,000 Canada Council fund and other support." Book collections were growing at a phenomenal rate compared to the nineteen forties, due to accelerated expenditures for acquisitions. An important factor, Priestley points out, was that "in a number of the major universities there is a recognition of the need for a radically new scale of appropriations for library expenditure". The rapid expansion created special problems, e.g., lack of adequate time for planning collection development on the part of the faculty and library staff, the need for expert bibliographers in the library organization, deficiencies in primary materials and too much attention to acquiring secondary sources, and the difficulties in obtaining out-of-print books. Microfilm, microcard, and Xerox reproductions were coming into increasing use.

Dr. Priestley commended the establishment of the National Library, the creation of the National Union Catalogue, surveys of manuscript holdings, and the work of the Canada Council. The Council would require "vastly increased funds," however, if it was to play an important part in creating adequate libraries.

5. *Library Support of Medical Education and Research in Canada*, by Beatrice V. Simon (1964), sponsored by the Association of Canadian Medical Colleges. This report of a survey of the medical college libraries of Canada was limited to the 12 universities that had medical colleges at the time of the study, and one in process of establishment. The distribution was: four in Quebec, four in Ontario, one in each of the four Western provinces, and one to serve the four Atlantic provinces. The survey and its findings are presented in four sections: (a) the impact on medical libraries of the changing requirements of medical education and research; (b) a summary of data on library collections, services, and facilities; (c) problems of library organization, staffing, and finance; (d) outline of a plan for improving medical information service at local, provincial, and national levels, based on a co-ordinated network of existing libraries.

The principal conclusions of the Simon report were that expanding research programmes, changing methods of teaching, and postgraduate study were increasing demands for library service; there was a serious lack of library support in the teaching hospitals; the world's output of medical literature had not been and was not being collected systematically in Canada; current serial subscriptions fell below recommended minimum requirements; there was a need for a national union catalogue of biomedical materials; physical facilities for medical libraries were grossly inadequate; changes in medical library organization were needed to improve services; library staffs ought to be strengthened; financial support of medical libraries was unrealistically low.

Proposals for a nation-wide programme for improving access to Canada's medical information resources were offered by the Simon report, among them: establishment of a National Medical Biblographic Centre and Information Service; special financial aid to bring the medical library collections up to standard; setting up medical libraries meeting professional standards in every teaching hospital in Canada; institution of a programme for training medical science librarians in an accredited Canadian library school; and provision of annual scholarships for practising medical librarians to enrol in summer courses in medical bibliography. For immediate action, several suggestions were offered for union lists of serials in medicine and the health sciences and for completing files of journals presently lacking.

6. *Forecast of the Cost of Academic Library Services in Canada, 1965-1975; a Brief to the Bladen Commission on the Financing of Higher Education, Submitted by the Canadian Association of College and University Libraries* (1964).

Taking cognizance of the financial requirements for maintaining and strengthening existing libraries and establishing good libraries in the new universities, the CACUL study presented a series of strong recommendations, including the following: (a) 10 percent of institutional operating budgets as a minimum for the operation and development of established libraries, and "considerably more" for the libraries of new institutions; (b) an initial book fund of $500,000 for books and a related amount for salaries during the first four years of library operation in a new institution; (c) special book funds to strengthen library holdings when specialists are appointed in new fields; (d) an average annual total of $50,000,000 for the operating cost of Canadian academic libraries during the next decade; (e) $110,000,000 to $145,000,000 for construction and enlargement of university library buildings over the next 10 years; (f) central control by the chief librarian of acquisition and cataloguing of all library materials; (g) provision of federal funds to establish and assist particular collections of national importance; (h) the cost of library service to a graduate student reckoned at eight times the cost of service to an undergraduate, and no graduate students be enrolled in programmes for which the institution lacked adequate library resources; (i) strengthen and enlarge library schools and improve library salary scales; (j) establish a library Resources Office in the National Library to co-ordinate university and college library development and co-operation on a national scale; (k) and finally (a recommendation which led to the present study), undertake a general survey of Canadian academic libraries, to assess present resources, assess needs, and to plan for meeting these needs in terms of book collections, buildings, and staff.

7. *Financing Higher Education in Canada; Being the Report of a Commission to the Association of Universities and Colleges of Canada* (1965). The Bladen Commission, as it is usually referred to in honor of its chairman, was concerned with all aspects of the financial needs and problems of Canadian colleges and universities. The section of its report devoted to libraries was based primarily on the CACUL study reviewed above, entitled *Forecast of the Cost of Academic Library Services in Canada, 1965-1975.*

8. *Guide to Canadian University Library Standards; Report of the University Library Standards Committee of the Canadian Association of College and University Libraries, 1961-1964* (1965). This important document goes beyond the two sets of standards adopted by the Association of College and Research Libraries in the United States which were restricted to junior and senior college libraries. The CACUL Committee aimed to "set up standards that would prove valuable in doing a survey of a university library." The great amount of detail included does not lend itself to brief summarization. For present purposes, it should be noted that the proposed criteria for evaluating academic libraries deal with the following basic aspects: the librarian as a university administrative officer, library staff, communications, financial standards of support, library collections, technical aspects, public services, departmental libraries, university library statistics, and the planning of library buildings.

9. *Ontario Libraries; a Province-Wide Survey and Plan, 1965,* by Francis R. St. John Library Consultants. The emphasis in the St. John report is clearly on nonacademic libraries—provincial, public, special and governmental, but separate chapters are devoted to school libraries and to higher education. The chapter dealing with college and university libraries concludes with recommendations for the addition of a specialist in this field to the staff of the Ontario Department of Education's Library Division; the centralizing in the University of Toronto of cataloguing for all libraries of higher educational institutions in Ontario; enforcement by the Committee of University Presidents of a division of subject collecting among the college and university libraries of Ontario; the fixing of library appropriations at a minimum of 10 percent of total university budgets; acceptance of responsibility by the Ontario college and university libraries "to back up the total library system in the Province," and experimentation with long distance facsimile reproduction.

10. *University Government in Canada; Report of a Commission Sponsored by the Canadian Association of University Teachers and the Association of Universities and Colleges of Canada* (1966). The Duff-Berdahl report devoted only one brief section to the place of the library in the university's organization. Its comments, however, deserve to be quoted verbatim:

> We were dismayed to find how often the control of the library and of library policies seemed to be regarded as merely an administrative matter. It is not; it is an essential part of the academic work of a university and as such should be closely co-ordinated with the development of educational policy, both short and long term. We recommend that library policy should evolve from the advice given by a strong committee of the Senate, representative of many disciplines and working in close liaison with the educational policy committees. If any Board members sit on the Senate they should participate on this committee, since the fiscal aspects of expensive library developments need to be integrated with policy decisions. If the Senate has no Board members, consideration might be given to inviting some members of the Board to serve on this committee. We also recommend that the Librarian should be *ex officio* a member of the Senate.

11. *A Draft Report on Position Classifications & Salary Scales in Canadian Academic Libraries.* Tabled by CACUL Committee (1966). An appraisal of professional, academic, and clerical positions, and recommendations on salaries "both in relation to the type of work performed and in relation to the incentives offered to the individual for the development of his or her special talents within an academic library." For the committee's purposes, library staff members are placed in two major groupings: professional librarians and subprofessional and supporting staff, including clerical ranks. For each category, comprehensive position descriptions are offered. The CACUL Committee decided not to recommend the adoption of professorial or faculty titles for professional librarians on the ground that "most Canadian libraries have not reached the size and degree of specialization which would sustain the argument for professional ranks and pay scales." In short, Canadian academic librarians were regarded as being in a "transitional stage," during which a system of equivalencies should be the aim. Nevertheless, there was recognition that full academic status for academic librarians was probably the wave of the future. The place of the specialist in university libraries was also treated in some detail by the committee and such positions grouped generically under six

headings: book selection and collections, administration, audio-visual, special materials, data processing, and publications.

12. *The Retrieval of Canadian Graduate Students from Abroad,* edited by Edward F. Sheffield and Mary Margot McGrail for the Association of Universities and Colleges of Canada (1966). Though this study has no specific application to librarians, a number of its findings and recommendations are pertinent to the acute problem of recruiting qualified staff for Canadian academic libraries. Example: "The Association of Universities and Colleges of Canada should continue to compile up-to-date lists of Canadians studying abroad and maintain contact with them through regular bulletins giving information about new developments and job opportunities."

13. *Science-Technology Literature Resources in Canada; Report of a Survey for the Associate Committee on Scientific Information,* by George S. Bonn (1966). A study sponsored by the National Research Council of Canada, complementary to the Williams investigation of resources for research in the humanities and social sciences. The purposes of the survey as stated were to provide a broad picture of Canadian library resources in the fields of science and technology (excluding medicine, already covered in the Simon report); to examine only publicly-supported major collections, available to the scientific and engineering community, primarily university, provincial research council, and large public libraries; to assess university library collections to determine how well they were meeting the needs of their clientele, to assess how satisfactorily research libraries in general were meeting the needs of scientists, engineers, and industry; and to consider the need for and possible location of a strong central collection somewhere in Canada of science-technology resource materials and any supplementary regional collections. A total of 53 institutions were in the survey group, divided among 33 university, 8 public, 7 research council, and 5 special libraries. Checklists, questionnaires, and personal visits were used to assemble required data. The checklists covered journals, abstracting and indexing services, major reference works, and book selection aids. In the course of his visits to universities, the surveyor sampled faculty attitudes toward available library services. He found a frequent breakdown of communication between the faculty and the librarians, though many librarians placed heavy reliance on faculty members for book selection.

Mr. Bonn concluded that there was a need for a strong central collection in science and technology, and recommended that the National Science Library in Ottawa serve as such a centre. In turn, the

National Science Library should encourage and assist selected regional libraries to enrich their collections and provide wider service, aided by special grants.

14. *Survey of the University of Alberta Libraries,* by Stephen A. McCarthy and Richard H. Logsdon (1966). This is an example of a number of detailed studies of individual libraries. The Alberta survey, done by the directors of the Cornell and Columbia Universities Libraries, explores and offers recommendations on administrative relationships of the libraries, internal organization, development of library resources, technical and public services, personnel, budget and finance, library buildings, automation, and a proposed school of library science. A similar study is *Toward a Library Worthy of Laval; Report of a Survey of the Laval University Library,* by Edwin E. Williams and Reverend Paul-Emile Filion (1962).

15. Canadian Dominion Bureau of Statistics, Education Division, *Survey of Libraries, Part II*: *Academic Libraries,* 1958-59 to date. An annual statistical summary, with analyses, of professional graduates of Canadian library schools, library collections, personnel, microtexts, audio-visual materials, use and special services, income and expenditures, and similar data. Part I deals with public libraries and Part III with library education. A "preliminary release" was issued in January 1967, covering the year 1965-66.

16. *Report to the Committee on University Affairs and the Committee of Presidents of Provincially-Assisted Universities of the Commission to Study the Development of Graduate Programmes in Ontario Universities* (1966). This document, "the Spinks Report," named for the chairman of the Commission responsible for its preparation, aroused extensive, and sometimes heated, discussion throughout Canada when it appeared late in 1966. Though ostensibly limited to one province, the Commission's findings are viewed by some commentators as having nationwide implications and ramifications. The Commission's assignment was to make a study of post-graduate education and research in the provincially-supported universities in Ontario with reference to quality, need, and resources, and to make recommendations concerning the development of work in this area in the next decade or so.

The Spinks Report points out that the proliferation of graduate courses and expansion of graduate enrolments in Ontario universities have placed grave strains upon library resources, already highly inadequate in most institutions. On the basis of various criteria, the Comission concluded that "only five of the 14 universities have library collections sufficient to support their *undergraduate* work;" a total of 585,000 volumes, costing $9,400,000 to acquire and process, would be required to bring the nine remaining universities up to par for *undergraduate work* (Commission's italics); some of the institutions with the highest graduate enrolments are most deficient in library resources, for both undergraduate and graduate study; none of the 10 universities with master's and doctoral programmes had collections large enough to support these programmes; the aggregate shortage for graduate work amounted to 4,790,000 volumes, which would cost a "shocking total" of $76,600,000 to acquire and process.

The Commission agreed that "the first obligation is to bring the *undergraduate* libraries of the nine now-deficient universities up to acceptable standards." For this purpose, there would be needed an "immediate investment of $9,400,000 distributed according to need among the nine universities." On the other hand, it was the view that "it is impracticable, if not literally impossible, for the Province to satisfy the needs of fourteen—or even eight—multi-purpose universities for fully comprehensive research libraries". Accordingly, it was strongly recommended that an Ontario Provincial Universities Library System be established. Under this scheme the research libraries of all the provincially supported universities would be designated as provincial resources and be available to all faculty and qualified graduate students in the Province. The major centre, proposed by the Commission, would be the University of Toronto Library which would be suitably expanded to take care of these new responsibilities.

17. New Brunswick, Committee on the Financing of Higher Education in New Brunswick, *Report* (1967). The committee was "appointed under Order in Council 66-79 of February 9, 1966, to make recommendations to the government regarding the types and amounts of assistance required in the field of higher education and to consider and report upon other related matters." The 72-page report manages the remarkable feat of analyzing in detail the financial problems of New Brunswick's colleges and universities without any mention of libraries, except several passing references to new library buildings. A similar document, *Education in the Atlantic Provinces; a Report Submitted to the Commission on the Financing of Higher Education by the Association of Atlantic Universities,* issued in 1965, also largely ignored the needs of libraries—in an area where the shortage of library resources is acute.

Profiles of Colleges and Universities

With few exceptions, the colleges and universities included in the present study are members of the Association of Universities and Colleges of Canada and degree-granting institutions. The following brief sketches present certain salient facts about each for background purposes. Enrolment figures are for the fall of 1966. Additional information may be found in the AUCC's *Canadian Universities and Colleges*, latest edition.

ACADIA UNIVERSITY, in Wolfville (Nova Scotia), population 2,413, 64 miles northwest of Halifax; enrolment 1,594, including 24 master's candidates. Founded as Queen's College in 1838 by the Nova Scotia Baptist Educational Society; name changed to Acadia College and then, in 1891, to Acadia University. Co-educational. Arts and science have been the major fields. Schools of engineering, theology, home economics, music, education, and secretarial science added since 1900. Degrees offered in arts, commerce, education, home economics, music, science, secretarial science, social work (through the associated Maritime School of Social Work), and theology.

UNIVERSITY OF ALBERTA, in Edmonton, population 385,000, capital of the province. Enrolment: 10,228 undergraduates, 783 masters and 67 doctoral candidates. Founded in 1906. Degrees offered in agriculture, arts, commerce, dentistry, education, engineering, fine arts, household economics, law, medicine, music, nursing, pharmacy, physical education, rehabilitation medicine, science, and theology (through affiliated St. Stephen's College). There are four affiliated junior colleges: Camrose Junior College at Camrose, Collège Saint-Jean, St. Joseph's College, and Red Deer Junior College at Red Deer. Distinctive programmes include cancer research, computing science, dental hygiene, educational administration, highway engineering, summer institute of linguistics, medical laboratory science, northern studies, nuclear research, photochemistry, physical fitness research, theoretical physics, radiation biology, and rehabilitation medicine.

BISHOP'S UNIVERSITY, in Lennoxville (Quebec), 3,700 population, three miles southeast of Sherbrooke; enrolment 848, including 17 master's candidates. Founded in 1843 as an Anglican college and acquired university status in 1853. Co-educational. Degrees offered in arts, business administration, divinity, education, and science.

BRANDON COLLEGE, in Brandon (Manitoba), 28,166 population, 138 miles west of Winnipeg; enrolment 784 undergraduates. Organized in 1899 by the Baptist Union of Western Canada; since 1938 nondenominational and affiliated to the University of Manitoba. Co-educational. Degrees offered in arts, education, music, and science. On July 1, 1967, Brandon acquired the status of a degree-granting institution.

UNIVERSITY OF BRITISH COLUMBIA, in Vancouver, estimated population 850,000; Canada's third largest city. A provincial university, nondenominational and co-educational founded 1908. Enrolment: 15,798 undergraduates, 1,021 masters and 541 doctoral candidates. Degrees offered in agriculture, architecture, arts, commerce and business administration, community and regional planning, dentistry, education, engineering, forestry, home economics, law, librarianship, medicine, music, nursing, pharmacy, physical education, rehabilitation medicine, science, social work, and theology (through affiliated colleges). Affiliated colleges include the Anglican Theological College of British Columbia, Union College of British Columbia, Carey Hall, St. Andrew's Hall, and St. Mark's College. Distinctive programmes in the University include oceanography, fisheries, community planning, neurological research, cancer research, earth sciences, and wildlife management.

BROCK UNIVERSITY, in St. Catharines (Ontario), 84,472 population; 12 miles from Niagara Falls and 75 miles southwest of Toronto. Incorporated in 1962 and instruction began in 1964. Degrees offered in arts and sciences. Enrolment of 550 undergraduates. Co-educational. A distinctive programme in the University is concerned with studies in land use and resource conservation.

UNIVERSITY OF CALGARY, in Calgary (Alberta), estimated population 323,000; 200 miles south of Edmonton. Established in 1945 as the University of Alberta, Calgary Branch; became autonomous in 1966. Enrolment: 3,740 undergraduates, 313 masters and 74 doctoral candidates. Degrees offered in arts, commerce, education, engineering, music, physical education and science. Distinctive programmes include archeology, cosmic ray studies, sulphur chemistry, summer institute of philosophy, Latin American studies in Mexico, and biological research at Kananaskis.

CARLETON UNIVERSITY in Ottawa (Ontario), national capital, population estimated at 482,000. Established in 1942 by the Ottawa Association for the Advancement of Learning; achieved university status in 1957. Enrolment: 3,374 undergraduates, 357 masters and 59 doctoral candidates. Co-educational. Degrees offered in arts, commerce, engineering, journalism, public administration, and science. There is only one professional faculty, engineering.

CENTRE DES ETUDES UNIVERSITAIRES, in Trois Rivières (Quebec), population 53,477; 88 miles northeast of Montreal. Enrolment: 788 undergraduates and 108 candidates for secondary education degrees. Degrees offered in education, letters, sciences, commerce and administration.

COLLÈGE DE l'IMMACULÉE-CONCEPTION, in Montreal, is the Jesuit seminary for the French-speaking section of the Order in Canada, a private university with a civil charter. Baccalaureate and doctoral degrees in theology and philosophy are conferred only on members of the Order. Established at Trois-Rivières in 1882, removed to Montreal in 1885. In the summer of 1967, the Faculty of Philosophy became associated with the Centre des Etudes Universitaries at Trois-Rivières.

COLLÈGE SAINTE-ANNE-DE-LA-POCATIÈRE, in Sainte-Anne de la Pocatière (Quebec). A classical college, affiliated with Université Laval since 1863. Enrolment: 511 undergraduates in arts and sciences.

COLLÈGE SAINT-LAURENT, in St. Laurent (Quebec), in suburban Montreal. Established 1847 by the Holy Cross Fathers. Enrolment: 491 undergraduates in arts and sciences. Affiliated with the Université de Montréal.

COLLÈGE SAINTE-MARIE, in downtown Montreal. Established in 1848 by the Jesuit Order, the largest "collège classique" in French Canada, affiliated with the Université de Montréal. Enrolment: 4,439 undergraduates (1,386 full-time), 1,841 non-credit students. Co-educational.

DALHOUSIE UNIVERSITY, in Halifax (Nova Scotia), estimated population 188,000; provincial capital and principal Atlantic port of Canada. Founded in 1818 as nondenominational, co-educational institution. Enrolment: 3,141 undergraduates, 317 masters and 55 doctoral candidates. There are degrees offered in arts, commerce, dentistry, education, engineering, law, medicine, nursing, pharmacy, physiotherapy, and science. The University of King's College is an associated university and the Nova Scotia College of Art an affiliated college. There are distinctive programmes in oceanography, engineering, physics, cancer research, and community studies.

ECOLE DES HAUTES ETUDES COMMERCIALES, in Montreal, affiliated with the Université de Montréal. Founded in 1907; 1,200 day and 5,700 evening students enrolled. Fields of study offered are administrative and commercial science, accounting, insurance, economics, and statistics.

ECOLE POLYTECHNIQUE, in Montreal (Quebec), affiliated with the Université de Montréal. Founded in 1873; enrolment of 1,547 undergraduates, 1,206 students in specialized programmes, and 83 graduate students. Degrees offered in eight branches of the pure and applied sciences.

UNIVERSITY OF GUELPH, in Guelph (Ontario), population 39,838; 50 miles west of Toronto. Created by the Ontario Legislature in 1964, but previously operated as Ontario Veterinary College, Ontario Agricultural College, and Macdonald Institute, affiliated with University of Toronto, beginning in 1888. Enrolment: 3,096 undergraduates, 249 masters and 63 doctoral candidates. Degrees offered in agriculture, agricultural engineering, landscape architecture, arts, household science, physical education, science, and veterinary medicine. Co-educational.

HURON COLLEGE, in London (Ontario), estimated population 196,000; 120 miles west of Toronto. Affiliated to the University of Western Ontario. Founded in 1863. Enrolment of 483 undergraduates in arts and 36 candidates for degrees in theology. Co-educational.

COLLÈGE JEAN-DE-BRÉBEUF, in Montreal; affiliated to the Université de Montréal. Founded in 1929 by the Jesuit Order. Enrolment of 561 undergraduates in arts and sciences. Co-educational.

KING'S COLLEGE, in London (Ontario). An affiliate of the University of Western Ontario. Represents a merger in 1966 of two older institutions: St. Peter's Seminary College of Arts and the College of Christ the King. A liberal arts college for men sponsored by the Roman Catholic Diocese of London. Enrolment of 65.

UNIVERSITY OF KING'S COLLEGE, in Halifax (Nova Scotia), an affiliate of Dalhousie University. Established in 1789 at Windsor, Nova Scotia; removed to Halifax in 1923. Co-educational. Undergraduate enrolment of 243. Degrees are offered in arts and sciences (through Dalhousie University), divinity, and social work (through the Maritime School of Social Work).

LAKEHEAD UNIVERSITY, in Port Arthur (Ontario), population 45,276, on Thunder Bay, at head of Lake Superior. Evolved from the Lakehead Technical Institute, established in 1946. Name changed to Lakehead University in 1965. Enrolment of 732 undergraduates and 471 diploma students taking technological courses. Degrees are offered in arts and sciences.

LAURENTIAN UNIVERSITY, in Sudbury (Ontario), population estimated at 112,000; 85 miles west of North Bay. A nondenominational, bilingual, and co-educational institution, incorporated in 1960; represents a federation of the University of Sudbury (Roman Catholic, founded in 1913), Huntington University (United Church, incorporated in 1960), and Thorneloe University, established 1961. Enrolment of 1,129 undergraduates. Bachelor's degrees offered in arts, commerce, and sciences. Algoma College (Sault Ste. Marie), Nipissing College (North Bay), and Collège de Hearst (Hearst) are affiliated colleges. Laurentian has a large extension programme serving up to 2,000 students per year.

UNIVERSITÉ LAVAL, in the city of Québec, estimated population 392,000. Founded in 1852 by the Séminaire de Québec, though directly descended from the Collège des Jésuites, founded at Québec in 1635, and the Séminaire de Québec, which had taught courses in the arts since 1765. A new campus was occupied by the Université in 1965, on the western boundary of Québec City. Enrolment: 8,017 undergraduates, 311 masters and 365 doctoral candidates. Co-educational. There are degree programmes in agriculture, architecture, arts, education, forestry, commerce, law, sciences, medicine, music, nursing, pharmacy, philosophy, psychology, hospital management, social service, and theology. The Université has some 45 affiliated colleges. Distinctive programmes in the Université include French and English language studies, folklore and ethnology, microbiology, nutrition, solid state physics, photogrammetry and Aristotlean-Thomist philosophy, Centre d'Etudes nordiques, Institut de Sciences Humaines, in approximately all 70 departments.

LOYOLA COLLEGE, in Montreal. Grew out of a separate course for English-speaking students established in 1889 at Collège Sainte-Marie. Now affiliated to the Université de Montréal. Enrolment of 4,794 undergraduates, divided about half and half between day and evening students. Co-educational. Degrees offered in arts, commerce, engineering, and science.

MACDONALD COLLEGE, at Ste-Anne-de-Bellevue (Quebec), founded in 1907. A constituent college of McGill University. Enrolment 1,647 undergraduates, 198 masters, and 49 doctoral candidates. Co-educational. Degrees are offered in agriculture (accounting for about 65 percent of the enrolment), household science, and education.

MCGILL UNIVERSITY, in Montreal; founded in 1813 and established as a university in 1821. Enrolment: 9,758 undergraduates and 2,620 masters and doctoral candidates. The University has nine faculties and eight schools; nondenominational and co-educational. Macdonald College at Ste-Anne-de-Bellevue, 25 miles from Montreal, an incorporated college of the University is the home of the Faculty of Agriculture, the School of Household Science, and the Faculty of Education. The following degree programmes are offered by the University: agriculture, architecture, arts, commerce, dentistry, divinity, education, engineering, home economics, law, library science, medicine, music, nursing, physical and occupational therapy, sciences, and social work. Distinctive programmes in the University deal with Arctic studies, cellulose chemistry, community planning, cyclotron physics, French Canada studies, international air law, Islamic studies, marine science, neurology, meteorology, parasitology, radiochemistry, international social work, woodlot management, space research, marine biology, tropical climatology, desalinification of water, subarctic research, and arid land development.

McMaster, in Hamilton (Ontario), estimated population 431,000; 43 miles southwest of Toronto. Incorporated as a Baptist institution in 1887, in Toronto. In 1927 transferred to Hamilton. Now nondenominational and co-educational. There are three constituent colleges: Hamilton College, comprising the science departments, nursing school, and engineering faculty; University College, comprising the departments of arts, humanities, and social sciences, and physical education; and College of Health Sciences. Enrolment: 3,972 undergraduates, 381 masters and 267 doctoral candidates and 47 post-doctoral students. Degree programmes include arts, commerce, engineering, music, nursing, physical education, science, and theology.

University of Manitoba, in Winnipeg, Manitoba, estimated population 490,000, capital of the Province; 60 miles north of U.S. boundary. The provincial university, established in 1877, nondenominational and co-educational. Enrolment: 8,740 undergraduates, 546 masters and 158 doctoral candidates. Degrees are offered in agriculture, architecture, arts, commerce, dentistry, education, engineering, fine arts, home economics, law, medical rehabilitation, medicine, music, nursing, pharmacy, physical education, sciences, social work, and theology (through affiliated colleges). Affiliated colleges are Brandon College at Brandon, Collège de Saint-Boniface at Saint-Boniface, St. John's College, St. Paul's College, and United College. St. Andrew's College is an associated college. The University has distinctive programmes in actuarial mathematics, city planning, interior design, Icelandic and Slavic studies.

Marianopolis College, in Montreal. Origin dates back to 1908. Enrolment: 435 undergraduates. Affiliated to the Université de Montréal. Woman's college, offering degrees in arts and science, with some orientation toward such fields as physiotherapy and home economics.

Université de Moncton, in Moncton (New Brunswick), population 43,840; 95 miles northeast of St. John. Created by the Legislature of New Brunswick in 1963, but tracing its origin back to 1864, with the founding of the Collège Saint-Joseph. Other affiliated colleges are Collège de Bathurst at Bathurst (1899) and Collège Saint-Louis at Edmundston (1946). Co-educational. Enrolment: 856 undergraduates, 914 extension students, and 64 masters candidates. Degree programmes are offered in arts, commerce, education, engineering, music, and sciences. Moncton is the provincially-supported, French language university of New Brunswick.

Université de Montréal, in Montréal, P.Q., Canada's largest city (estimated population 2,321,000). Founded in 1878 as a branch of Université Laval; became separate and autonomous in 1921. Enrolment: 7,864 undergraduates, 1,375 masters and 462 doctoral candidates. Co-educational. Degree programmes are offered in architecture, arts, commerce, dentistry, education, engineering, hygiene, hospital administration, law, library science, medieval studies, medicine, music, nursing, nutrition, optometry, pharmacy, philosophy, physical education, physiotherapy, sciences, social service, theology, urban planning, and veterinary medicine. Affiliated schools are the Ecole des Hautes Etudes Commerciales, Ecole d'Optométrie, Ecole Polytechnique, Institut Marguerite d'Youville, Institut Pédagogique, L'Ecole de Médecine Vétérinaire (at Saint-Hyacinthe), and Thomas More Institute for Adult Education. There are two English-language affiliated colleges (Loyola and Marianopolis) and 38 affiliated classical colleges. Also associated with the University through one of its faculties are nine schools of music, five theological seminaries, and 11 "instituts familiaux." Distinctive programmes in the University are concerned with bilingual studies (English-French), experimental psychology, public law, religion, exceptional children, cinematography, African studies, demographic studies, criminology, and urbanism.

MOUNT ALLISON UNIVERSITY, in Sackville (New Brunswick), population 3,038; 30 miles southeast of Moncton. Founded in 1843 as Mount Allison Wesleyan College; name changed in 1913 to Mount Allison University. Co-educational. Nonsectarian, though connected with the United Church of Canada. Provincially supported. Enrolment: 1,230 undergraduates and three masters candidates. Degree programmes include arts, commerce, education, engineering, fine arts, home economics, law, music, sciences, secretarial science, social work (through the Maritime School of Social Work in Halifax), and theology (through the Pine Hill Divinity Hall, also in Halifax).

MOUNT SAINT VINCENT UNIVERSITY, in Halifax (Nova Scotia). Began as junior college in 1914, associated with Dalhousie University; chartered as Mount Saint Vincent College in 1925, and achieved university status in 1966. Primarily a woman's university, though men are admitted to extension and summer session classes. There are 590 undergraduates and 20 masters candidates enrolled. Degree programmes are offered in arts, business, education, home economics, music, nursing, radiologic technology and sciences. A Psycho-Educational Centre is maintained for the diagnosis and treatment of reading problems.

UNIVERSITY OF NEW BRUNSWICK, in Fredericton, population 19,683, capital of the province, 64 miles northwest of St. John. Founded in 1785 as the Provincial Academy of Liberal Arts and Sciences, transformed in 1800 by provincial charter into College of New Brunswick, in

1828 renamed "King's College, New Brunswick," and in 1859 became the University of New Brunswick. Enrolment: 3,325 undergraduates, 287 masters and 65 doctoral candidates. Nondenominational and co-educational. Degree programmes include arts, business administration, education, engineering, forestry, law, nursing, and sciences. A constituent college is the University of New Brunswick in St. John, a junior college established in 1964, which has an enrolment of 338 students. The University has distinctive programmes in engineering, forestry, nursing education, structural chemistry (covering field of aconite alkaloids), and surveying engineering.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND, in St. John's, estimated population 95,000, provincial capital, most easterly part of North America, 500 miles northeast of Halifax. Founded in 1925 as a memorial to the men of Newfoundland and Labrador who died in World War I; achieved university status in 1949. Newfoundland's only institution of higher education. Enrolment: 3,846 undergraduates, 110 masters and three doctoral candidates. Co-educational. Degree programmes offered in arts, commerce, education, engineering, forestry, nursing, physical education, and sciences. There are two affiliated colleges: Queen's College, established 1841, offering courses in theology; and St. Bride's College at Littledale, a Catholic junior college for women, established in 1884. Government policy is based increasingly on the assumption that Newfoundland will have to be very nearly self-sufficient in terms of the skills required for a modern industrialized society, a philosophy which will require rapid expansion of the University, including the addition of faculties of medicine, engineering, and possibly law, as well as expanded graduate programmes in arts and science.

NOTRE DAME UNIVERSITY, in Nelson (British Columbia), population 11,000; 46 miles northeast of Trail. Founded in 1950. A co-educational, Catholic institution. There are 596 undergraduates enrolled. Degree programmes are offered in arts, education, sciences, medical records library science (the first such programme in Canada), and secretarial science. Some federal but no provincial government grants have been received for the University's support.

NOVA SCOTIA AGRICULTURAL COLLEGE, in Truro (Nova Scotia), population 12,421; 60 miles northeast of Halifax. Established by the Legislative Assembly in 1905, absorbing the School of Agriculture (1885), and the School of Horticulture (1893). Nondenominational and co-educational. Offers a diploma in agriculture. Enrolment about 100.

Nova Scotia Technical College, in Halifax. Authorized by provincial Legislature in 1907 and instruction began in 1909. Nondenominational and co-educational. Enrolment: 341 undergraduates, 70 masters and 21 doctoral candidates. There are degree programmes in architecture, engineering, and science (applied mathematics and materials science).

University of Ottawa, in Ottawa. Originated in 1848 as the College of Bytown. Name changed to College of Ottawa in 1861 and raised to the rank of university in 1866. The faculties of theology and canon law are in Saint Paul University, federated to the University of Ottawa. Enrolment: 3,847 undergraduates, 552 masters and 201 doctoral candidates. Co-educational. There are degree programmes in arts, commerce, education, engineering, home economics, hospital administration, law, canon law, library science, medicine, nursing, philosophy, psychology, science, social science, social welfare, and theology. Instruction is bilingual. There are 10 affiliated colleges in Ottawa or elsewhere in Canada. Until 1965, the University was a church-supported institution.

Prince of Wales College, in Charlottetown (Prince Edward Island), capital of the province, population 18,318. Established in 1834; authorized to grant degrees in 1964. A publicly-owned, nondenominational, co-educational university. There are degree programmes in agriculture, arts, education, and home economics. About 700 undergraduates are enrolled.

Queen's University, in Kingston (Ontario), population 53,526; 165 miles east of Toronto. Charter issued by Queen Victoria in 1841 to "Queen's College at Kingston." Originally sponsored by Presbyterian Church of Canada, but now nondenominational and co-educational. Enrolment 5,278 undergraduates, 405 masters and 244 doctoral candidates. Degrees are offered in arts, business, divinity, law, medicine, nursing, physical education, and pure and applied sciences. The Queen's Theological College, established 1912, is an affiliated institution. The University has distinctive programmes in local government, a summer institute of economic research, industrial relations centre, and executive training.

Royal Military College, in Kingston (Ontario), founded in 1874. One of three Canadian Services Colleges maintained by the Department of National Defense. Enrolment 1,083 undergraduates. Degrees offered in arts, engineering, and science. Collège Militaire Royal, St. Jean (Quebec) and Royal Roads, Victoria (British Columbia) are affiliated colleges.

ST. DUNSTAN'S UNIVERSITY, in Charlottetown (Prince Edward Island), population 18,318, capital of the province. Enrolment: 755 undergraduates. Founded under Roman Catholic sponsorship as St. Dunstan's College in 1855; name changed to St. Dunstan's University in 1917. From 1892 to 1941 affiliated with Université Laval. Co-educational. Degrees or diplomas are offered in arts, commerce, education, engineering, nursing (in co-operation with the Charlottetown Hospital of Nursing and Boston College School of Nursing), science, and secretarial studies. Marian College, Charlottetown, is a constituent college for women registered at St. Dunstan's (but not a teaching college).

ST. FRANCIS XAVIER UNIVERSITY, in Antigonish (Nova Scotia), population 4,344; 40 miles east of New Glasgow. A Roman Catholic, co-educational institution. Founded in 1853. There are 1,859 undergraduates and 78 masters candidates enrolled. Degree programmes are offered in arts, business, education, engineering, home economics, library science, nursing, science, secretarial science, and social work (through the Maritime School of Social Work). Xavier College at Sydney is a constituent junior college and there are two affiliated colleges: Mount St. Bernard College and St. Martha's School of Nursing. The institution is famous for its pioneering social work with farmers and fishermen of the area. A special institute draws students from all over the world for training in techniques of social self-improvement (co-operatives, adult education, etc.) The province is taking over major responsibility for the University's support.

ST. JOHN'S COLLEGE, in Winnipeg (Manitoba), affiliated to the University of Manitoba. Founded in 1866; a co-educational liberal arts and theological college connected with the Anglican Church of Canada. Enrolment: 311 undergraduates and eight masters candidates. Degrees are offered in arts and science and in theology.

SAINT MARY'S UNIVERSITY, in Halifax (Nova Scotia). Founded as Saint Mary's College in 1802; became Saint Mary's University in 1852. A Roman Catholic institution for men, though women may register in the evening division and in the Faculty of Education. There are 1,034 undergraduates enrolled. Degree programmes include arts, commerce, education, engineering, science, social work (through the Maritime School of Social Work), and theology (through two affiliated colleges: Ignatius College of Guelph and Regis College at Toronto). Distinctive programmes in the University deal with linear programming and research, use of digital computer in industry, and satellite and missile observation.

UNIVERSITY OF ST. MICHAEL'S COLLEGE, in Toronto, federated with the University of Toronto. Established in 1852. Comprises St. Michael's

College, St. Basil's Seminary, and Pontifical Institute of Medieval Studies. Enrols 1,684 undergraduates, 25 masters and 11 doctoral candidates. There are degree programmes in arts, commerce, and science (all through the University of Toronto), medieval studies, and theology.

ST. PAUL UNIVERSITY, in Ottawa, federated with the University of Ottawa in 1965. Established in 1848. Enrolment: 382 undergraduates, 130 masters and 35 doctoral candidates. Confers ecclesiastical degrees in philosophy, theology, and canon law.

ST. PAUL'S COLLEGE, on University of Manitoba Campus, Winnipeg. Established under Jesuit direction in 1926 and affiliated to the University of Manitoba in 1931. There are 524 undergraduates enrolled. Degrees are offered in arts and science through the University of Manitoba.

ST. PETER'S SEMINARY (Dept. of Pre-Theology), in London (Ont.), was founded in 1912 and affiliated to the University of Western Ontario in 1919. The affiliation became centered in King's College in 1966, and St. Peter's Seminary College of Arts became the Pre-Theology Department of King's College.

UNIVERSITY OF SASKATCHEWAN, in Saskatoon, population 106,000: 120 miles northwest of Regina. Established by Legislative Assembly of Saskatchewan in 1907. Enrolment: 8,496 undergraduates, 383 masters and 179 doctoral candidates. Co-educational. Degree programmes are offered in agriculture, arts, commerce, education, engineering, home economics, law, medicine, nursing, pharmacy, physical education, science, theology (through affiliated colleges) and veterinary medicine. There is one federated college, St. Thomas More College, and seven affiliated colleges, all in Saskatoon, except Luther College in Regina, St. Joseph's College in Yorkton, and St. Peter's College, Muenster. The University maintains distinctive programmes in agriculture, northern studies, upper atmospheric research, linear accelerator, cancer research, and veterinary medicine.

UNIVERSITY OF SASKATCHEWAN, in Regina, population 126,000, capital of province. Grew out of Regina College, established in 1911, and taken over as a constituent college of the University of Saskatchewan at Saskatoon in 1934. Name changed in 1961 to University of Saskatchewan, Regina Campus. Now largely autonomous. Enrolment: 2,631 undergraduates, 44 masters and four doctoral candidates. Degree programmes at Regina are in arts, education, engineering, music, public and business administration, and science.

SÉMINAIRE DE QUÉBEC, in Québec, P.Q. Affiliated with Université Laval in 1863, though its history dates back to 1668. There are 360 undergraduates enrolled in arts and sciences.

SÉMINAIRE SAINT-AUGUSTIN, in Cap Rouge (Québec), near Quebec City. Enrolment: 581 undergraduates, residential. Established on a new campus in 1965. Affiliated with Université Laval.

UNIVERSITÉ DE SHERBROOKE, in Sherbrooke (Québec), population 66,554; 98 miles south of Montreal. A Roman Catholic institution founded in 1954. Co-educational. Enrolment in 1965-66: 3,455 undergraduates and 178 masters candidates. There are degrees offered in administration, arts, law, engineering, medicine, education, science, and theology. Sherbrooke is the youngest French university of Québec (after Laval and Montréal). Many graduate programmes are being developed and a new medical school is in process.

SIMON FRASER UNIVERSITY, in Burnaby (British Columbia), population 100,157; a suburb of Vancouver. Established in 1963 as a provincial university, nondenominational and co-educational. Opened in 1965. Enrolment: 4,063 undergraduates, 79 masters and 54 doctoral candidates. Degree programmes in arts, education, and science.

SIR GEORGE WILLIAMS UNIVERSITY, in Montreal. The institution grew out of work initiated by the YMCA in Montreal in 1873. The name Sir George Williams College was adopted in 1926 and changed to Sir George Williams University in 1959. Nondenominational and co-educational. The University occupies high-rise buildings in the centre of Montreal and serves a large number of evening students. Enrolment: 4,401 full-time and 9,585 part-time undergraduates and 33 masters candidates. Degrees are offered in arts, commerce, engineering, and sciences.

UNIVERSITY OF TORONTO, in Toronto (Ontario), Canada's second largest city (estimated population 2,066,000) and capital of the province. Founded in 1827 as King's College of York, in close connection with the Church of England. Secularized and name changed to University of Toronto in 1849. A provincial university of Ontario, co-educational and, except for three federated institutions, nondenominational. The federated universities are University of St. Michael's College, University of Trinity College, and Victoria University, and there are two affiliated theological colleges, Knox and Wycliffe. The constituent colleges are Innis, New, Erindale, Scarborough and University; Massey College is a graduate residential college. Special research facilities include: The Banting and Best Institute for teaching, clinical investigation and medical research; the Connaught Medical Research Laboratories for research in preventive medicine and related fields; the Dunlap Observatory for research in astronomy; the Institute for Aerospace Studies for research in the mechanisms of gases and plasmas, design and analysis of flight structures, etc.; Institute of Computer Science; the Institute of Earth Sciences; the Great Lakes Institute for advanced study and research in oceanography and limnology. Other research units are the Institute of Biomedical Electronics, Centre of Criminology, Centre for Culture and Technology, Centre for Medieval Studies, Centre for Russian and East European Studies, Centre for Urban Studies, Centre for Industrial Relations, Centre for Study of Drama, and Centre for Linguistic Studies. Degree programmes are offered in architecture, arts, child study, commerce, computing and data processing, dentistry, education, engineering, food sciences, forestry, hygiene, law, library science, medicine, music, nursing, pharmacy, physical and health education, and social work. Enrolment 19,700 (including 4,630 part-time) undergraduates, 2,792 masters and 1,172 doctoral candidates, and 1,847 other graduate degree, diploma, and certificate candidates.

TRENT UNIVERSITY, in Peterborough (Ontario), population 47,185; 90 miles east of Toronto. Created in 1963 as an independent university by Ontario Legislature. Enrolment: 523 undergraduates. There are three constituent colleges: Catharine Parr Traill College, Peter Robinson College, and Champlain College. Degrees are offered in the arts and sciences. Graduate programmes are beginning. The educational programme is distinguished by extensive use of small tutorial groups rather than lectures and by a college system which aims at integrating social, residential, and academic life in 10 small colleges.

UNIVERSITY OF TRINITY COLLEGE, in Toronto, federated with the University of Toronto since 1904. Founded in 1851 as Trinity College, originally designated as the Church of England University of Upper Canada. Is now an Anglican, co-educational institution. Degrees are offered in arts, commerce, and science, through the University of Toronto, and in theology.

UNITED COLLEGE, in Winnipeg (Manitoba). Affiliated to the University of Manitoba. Constituted by legislative act in 1938, representing a merger of Manitoba College, founded by the Presbyterian Church in 1871, and Wesley College, founded by the Methodist Church in 1877. Enrolment: 1,698 undergraduates and 26 masters candidates. There are degrees offered in arts, science, and theology through the University of Manitoba.

VICTORIA UNIVERSITY, in Toronto, federated with the University of Toronto. Co-educational. United Church affiliation. One of eight arts colleges within the Faculty of Arts and Science of the University of Toronto. Originally established as the Upper Canada Academy at Cobourg, Ontario, in 1836. Named Victoria College in 1841, and moved to Toronto in 1892. Degrees are offered in arts, commerce, and science through the University of Toronto, and in theology. Enrolment: 2,450 undergraduates, 26 masters and nine doctoral candidates, and 71 professional students.

UNIVERSITY OF VICTORIA, in Victoria (British Columbia), estimated population 168,000; the provincial capital, at the southern tip of Vancouver Island. The University came into being in 1963 after 60 years' existence as Victoria College. From 1903 to 1914, the College was affiliated to McGill University, and from 1920 to 1963 to the University of British Columbia. Autonomy was granted in 1963. Enrolment: 3,450 undergraduates, 45 masters and two doctoral candidates. There are degree programmes in arts, education, fine arts, and science.

UNIVERSITY OF WATERLOO, in Waterloo (Ontario), population 21,366; two miles from Kitchener and 33 miles northwest of Hamilton. Incorporated in 1959, though classes began in 1957. Nondenominational and co-educational. Enrolment: 4,990 undergraduates, 482 masters and 283 doctoral candidates. Degree programmes in arts, engineering, environmental design, physical and health education, and science. Originally, Waterloo's academic programme was concentrated almost exclusively on science and engineering, and the largest proportion of its research and graduate teaching activity is still in science, mathematics, and technology, but coverage is now being extended into all major subject fields. The Co-operative Engineering Course at Waterloo offers a programme unique in Canada of alternating periods in classroom and industry. The University of St. Jerome's College is a federated university and there are three affiliated colleges: Conrad Grebel, Renison, and St. Paul's United, all in Waterloo.

WATERLOO LUTHERAN UNIVERSITY, in Waterloo. Opened in 1911 as the Evangelical Lutheran Seminary of Canada and evolved through various stages until 1960, when the institution was chartered as Waterloo Lutheran University. Co-educational. Enrolment: 2,400 undergraduates and 26 masters candidates. There are degrees offered in arts and science, social work, and theology. The Mennonite Brethren College of Arts at Winnipeg is an affiliated college. This university is the last remaining degree-granting institution in Ontario which does not depend principally on the provincial government for financial support. Until the current year, about 20 percent of its budget has come from the federal government. Withdrawal of this income left the University in serious financial straits. Consequently, the Ontario provincial government announced that all church-related universities that received federal grants in 1966-67 would get aid totaling half of the sum they would be entitled to were they nondenominational — about the same amount as Waterloo Lutheran received from the federal government during the previous year.

UNIVERSITY OF WESTERN ONTARIO, in London, population estimated at 196,000; 120 miles west of Toronto. Chartered by the Ontario Legislature in 1878 as "Western University of London, Ontario"; name changed in 1923 to University of Western Ontario. There are six constituent colleges: Middlesex College, College of Music, College of Science, Talbot College, University College, and Althouse College of Education. Affiliated colleges are Brescia, Huron, and King's, all in London. Enrolment: 5,655 undergraduates, 694 masters and 254 doctoral candidates. Co-educational. Degree programmes in arts, business administration, dentistry, engineering, journalism, law, library and information science, medicine, music, nursing, science, and theology (through affiliated colleges). A summer school of Indian archeology is conducted at Penetanguishene, Ontario.

UNIVERSITY OF WINDSOR, in Windsor (Ontario), estimated population 206,000, on Detroit River, opposite Detroit, Michigan. Developed out of Assumption College, founded in 1857; name changed to Assumption University of Windsor in 1956. In 1963, the University of Windsor was incorporated as a nondenominational, co-educational institution, and Assumption University became a federated college. Enrolment: 2,589 undergraduates, 283 masters and 64 doctoral candidates. Degrees are offered in arts, commerce, engineering, nursing, physical and health education, science, and social work. There are three affiliated colleges: Canterbury, Holy Redeemer, and Iona, representing the Anglican, Roman Catholic, and United Churches, respectively.

XAVIER COLLEGE, in Sydney (Nova Scotia), population 33,617; 250 miles northeast of Halifax. A constituent college of St. Francis Xavier University. A co-educational Roman Catholic junior college, founded in 1951, offering two years of university studies beyond junior matriculation in arts, science, and business administration. Enrols 470 undergraduates.

YORK UNIVERSITY, in Toronto, established by Ontario Legislature in 1959, as a nondenominational, co-educational institution. There are two campuses: Glendon Campus, a residential liberal arts college for about 1,000 students; and York Campus, the main campus. Enrolment: 2,417 undergraduates and 495 full-time and part-time masters and 32 full-time and part-time doctoral candidates. There are four constituent colleges:

Joseph E. Atkinson, Glendon, Founders, and Vanier. Other colleges are planned as the enrolment increases. There are degree programmes in arts and science and business administration. Through the Centre for Research in Experimental Space Science, the Departments of Chemistry and Physics are engaged in co-operative research in laboratory astrophysics, chemical aeronomy, and chemical physics.

The "Collèges Classiques" of Quebec

(The following account of an important group of Canadian institutions, 97 in number, the "classical colleges" of Quebec, was prepared by Paul-Emile Filion, S.J.)

Quebec counts as many undergraduates as Ontario but most of the French Canadian college students do not study or live on the campus of the three French-language universities (Laval, Montréal, Sherbrooke): the attend the "collèges classiques", private, usually church-related liberal arts institutions, scattered all over the province and affiliated with one or another of the universities.

If the picture of the colleges of Quebec is limited to AUCC ordinary members, it is completely inaccurate and misleading. All classical colleges have libraries, some being sizeable and many of the outstanding professional French-speaking librarians work in these "collèges". The colleges are grouped together in a strong "Fédération" and have developed services which cannot be ignored.

In December 1966, the "Fédération des Collèges Classiques" was made up of 97 institutions grouping 25,862 full-time students of college level, plus 13,000 part-time students and 9,000 taking non-college courses. These colleges are not counted usually as part of the universities for statistical purposes. The status of the colleges, however, is rapidly changing, following the report of a Royal Commission (the "Parent Commission") which recommended a radical change in the structure of post-secondary education in Quebec.

As a matter of fact, many of the "collèges" count more students at the high school than at the college level: these institutions will likely drop the college section and continue as secondary schools, whether as private institutions or part of the public system.

Others, especially the larger ones, will join with neighbouring post-secondary institutions to form a "CEGEP", that is a "Collège d'Enseignement Général et Professionel", which is a type of publicly-owned post-secondary multi-functional college (combining academic and vocational education), set up under a law passed at Quebec City in June

1967. Thus, the assets and book collections of the classical colleges will be redistributed in the next five years.

The "Fédération des Collèges Classiques" has collected and compiled statistics on the libraries of its members. According to the latest yearbook or "annuaire" (1966-67), there were 2,184,414 volumes in 93 colleges. As for the size:

35 colleges had 10,000 to 20,000 volumes
33 colleges had 20,000 to 40,000 volumes
21 colleges had 40,000 to 80,000 volumes
4 colleges had more than 80,000 volumes.

The last four were the Séminaire de Québec, Collège Sainte-Marie, Collège Jean-de-Brébeuf, and Collège Saint-Laurent. Of course, not all of the 93 colleges have fully-catalogued collections and report at times a total count of books which includes unprocessed items.

The "Fédération" has set up a Library Commission which is very active; they meet regularly; they publish documents; they have been instrumental in the professional training of a relatively large number of librarians and run successful Summer Sessions for technicians. They have sent to their members very detailed questionnaires which have been compiled, analyzed, and distributed.

One of the latest compilations is that on administration which was prepared by the librarian of the Collège Saint-Laurent, Mr. Jean-Bernard Leveillé. ("Enquête sur les bibliothèques de collège, 1966: Budget-Services-Utilisation, avril 1967"). This document summarizes and analyzes the surveys of 1963, 1964 and 1965. Earlier studies were compiled from the questionnaires on professional and non-professional staff.

Through its Library Commission, the Fédération has developed the "Centrale des Bibliothèques", a service agency which has prepared and issued books of library techniques for the libraries of Quebec, has set up an exchange system, (the exchange list, centrally edited, is called "Biblio-Troc"), and has published millions of cards based on standard lists for French Canadian colleges.

The lists, for which cards were printed, are called "Choix de livres" and are grouped in series. A compilation has been made of the first ten lists (by authors); it is called *Index récapitulatif des dix premières listes bibliographiques*. The "Centrale des Bibliothèques" has also issued different forms for reserve books, book pockets, Kardex-type forms, etc. It was instrumental in the inception of the *Index Analytique,* prepared by the Université Laval and continues to help in its preparation.

As the "collèges classiques" are being transformed into a new type of institution, these services of the "Fédération" will be modified and become part of a much more extensive development; the team work of a large number of librarians and administrators and the impressive attainments of the "Centrale des Bibliothèques" will influence future library development in Quebec.*

Summary

Numerous previous surveys touching on Canadian academic libraries have been undertaken during the past two decades. In various ways, the deficiencies and needs of the libraries have been emphasized by the educators and librarians responsible for the studies. Nearly all the investigators have contributed in some measure to focusing attention on the problems and to finding solutions for the libraries' shortcomings.

The foregoing "profiles" of colleges and universities demonstrate the great variety of institutions of higher education which have grown up in Canada during and since Colonial days, under private and public auspices. Here, if properly maintained and supported, is the nucleus for a magnificent educational system.

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*A recent study by the Director of the Library School of the Université de Montréal should be mentioned here· Denis, Laurent G. *Etude sur la gestion des bibliothèques de six collèges classiques de la Province de Québec*. Montréal, Association Canadienne des Bibliothécaires de Langue Française. 1966, (Travaux et documents, 2).
See also: Fédération des Collèges Classiques, *Annuaire, 1966-67*. Montreal: The Federation, 1966. 192 p.

2. Administrative Organization

The first essential in an adequate library programme is a plan of library government or policy that will ensure the effective, functional operation of the university or college library and all of its divisions. What are some of the characteristics of such a policy? On the basis of accepted theories of good administration and of practical experience in many institutions, the following principles are generally recommended:

1. A sound policy clearly defines the relation of the librarian to the administration. The librarian is assigned responsibility for a major unit of the university serving every department and office in the institution; therefore, he should be nominated for appointment by the president and report to the president, as do other chief administrative and educational officers.

2. The policy should define what constitutes the library resources of the university, specifying that they shall include all books, pamphlets, periodicals, and other materials purchased or acquired in any manner by the university and preserved and used in libraries to aid students and investigators.

3. A good policy places the administration of all library resources and services wherever located under the university librarian.

4. A well-thought-out policy should describe the librarian's duties, making him responsible for the selection, acquisition, and preparation for use of books, journals and other library materials; for the selection and direction of the library staff; for the preparation of budgets and reports; and for the performance of such other duties as are commonly included under university library administration.

5. The policy should provide for a faculty library committee to assist the librarian in the allocation of book funds, to advise in programmes of library development, and to bring faculty points of view to the administration of the library. The committee should be representative of the university (including one or more students), its members chosen for their interest in the development of the library resources of the whole university rather than of one particular area, and its functions should be informative and advisory, rather than administrative and executive.

6. Finally, a policy statement ought to define the relationship of the librarian and the library staff to the educational and administrative units of the university, and the status of library staff members in relation to academic rank, tenure, sabbatical leaves, group insurance, retirement, and any other provisions which the university may make for its administrative, instructional, and professional members.

Such a statement of principles as that outlined above is not intended to confer upon the librarian any unusual or dictatorial power, but rather to give him the authority and standing needed to administer any large and important division of the university. The recommended policies rest upon the premises that the librarian and his staff are competent and merit such responsibility and the activities of the library are sufficiently important to the university to require centralized, efficient, and expert direction.

Officer to Whom Librarian Reports

Using the stated principles as a guide, it is in order to examine the administrative structure of Canadian university libraries. The first question asked was "To whom does the librarian report?" The overwhelming response was, to the president (or principal or rector). This is the policy at Acadia, Alberta, Bishop's, Brandon, British Columbia, Brock, Carleton, Dalhousie, Guelph, Lakehead, Laval, McGill, McMaster, Moncton, Mount Allison, Mount Saint Vincent, New Brunswick, Newfoundland, Notre Dame, Nova Scotia Technical, Ottawa, Prince of Wales, St. Dunstan's, Saint Mary's, Saskatchewan, Sherbrooke, Simon Fraser, Sir George Williams, Trent, Victoria, Waterloo, Waterloo Lutheran, and Windsor. The exceptions were the following:

University of Calgary — Vice-President
Laurentian University — Academic Vice-President
University of Manitoba — to the President through Dean of Graduate Studies
Université de Montréal — Vice-Rector
Queen's University — Vice-Principal (Academic) with direct access to Principal
St. Francis Xavier University — Executive Vice-President and President
University of Toronto — for policy, to Library Council, of which President is chairman; for budget, to the President
University of Western Ontario — Vice-President
York University — Vice-President

The overall situation thus appears excellent from an administrative point of view, with the librarian either reporting directly to the president or to a high officer to whom the president has delegated authority.

Centralization of Administration

There was similar unanimity in the answers to a second question, "Is library administration centralized?" The following institutions replied in the affirmative, without reservations: Acadia, Alberta, Bishop's, British Columbia, Brock, Calgary, Carleton, Guelph, Lakehead, Laurentian, Laval, McGill, McMaster, Manitoba, Moncton, Mount Allison, Mount Saint Vincent, New Brunswick, Newfoundland, Notre Dame, Nova Scotia Technical, Ottawa, Prince of Wales, St. Dunstan's, St. Francis Xavier, St. Mary's, Saskatchewan, Sherbrooke, Simon Fraser, Sir George Williams, Trent, Victoria, Waterloo Lutheran, Windsor, Western Ontario, and York. The exceptions in this instance were the following:

Brandon College — yes, except for music
Dalhousie University — yes, except law and medical-dental libraries
Université de Montréal — only main library is under central direction
Queen's University — yes, but many branch libraries are supervised by teaching departments
University of Toronto — "there are several independent units"

Thus, the important principle of centrality of university library administration is well established throughout Canadian higher educational institutions, with only limited departures, except in the case of the Université de Montréal.

Faculty Library Committees

A third question introduced the matter of faculty library committees. Is there a faculty library committee? If so, what are its functions, what is its composition, and how is it selected? Since there is considerable variation in practices, an institution-by-institution survey is pertinent. The principal facts, as reported, are as follows:

ACADIA UNIVERSITY. Composed of seven faculty members, plus the Librarian, selected by a nominating committee consisting of the President and four faculty members. The functions of the committee are listed as follows: (1) advise with the Librarian as to general library policy; (2) receive library budget proposals for books and periodicals from each department and make recommendations for departmental library budgets; (3) recommend general-fund library budget; (4) recommend to the Board of Governors a library budget including the departmental and general-fund budgets; (5) allocate approved library budget to the various departments; (6) govern policy concerning residential libraries; (7) govern policy concerning departmental libraries; (8) establish guide lines with respect to the allocation and use of faculty study stations in the library; (9) establish guide lines with respect to the allocation and use of student study stations in the library; (10) promote the development of the library and, particularly, to seek increased budgets for books and periodicals.

UNIVERSITY OF ALBERTA. Committee of nine full professors chosen by a special committee of the General Faculty Council. The composition and appointment, as well as the functions of the committee, are currently under review.

BISHOP'S UNIVERSITY. A committee of seven, including the Vice-Principal (chairman); the Deans of Arts, Science and Theology; two junior faculty members (one each from Arts and Science); and the Librarian; all selected by the Principal. The committee is advisory to the Librarian and serves as liaison with the faculty.

BRANDON COLLEGE. A committee of the general faculty, appointed by the President, is concerned with the book budget and evolves and advises upon general library policies and development.

UNIVERSITY OF BRITISH COLUMBIA. The library committee is appointed by the President in consultation with the Senate Committee on Committees. The Senate Library Committee is charged with the responsibility of advising and assisting the Librarian in: (1) Formulating a library policy in relation to the development of resources for instruction and research; (2) allocating book funds to the fields of instruction and research; (3) developing a general programme of library service for all the interests of the University; (4) keeping the Librarian informed concerning the library needs of instructional and research staff; (5) interpreting the Library to the University. The Librarian commented that there has long been "a close and productive relationship . . . ensuring that the development of the Library has been in step with the academic programme."

BROCK UNIVERSITY. A Senate Library Committee is appointed by the Senate and reports directly to the Senate.

UNIVERSITY OF CALGARY. A committee, "broadly inter-faculty," is advisory to the Librarian.

CARLETON UNIVERSITY. A committee of seven faculty members, appointed by the Executive Committee of the Senate, with the Librarian, ex officio, serving as Secretary. The committee's terms of reference are these: (1) to report on the adequacy of library facilities; (2) to recommend regulations concerning the use of the Library; (3) to make recommendations designed to encourage effective use of the Library; (4) to recommend general policies governing the operation of the Library; (5) to recommend policies governing the selection of books; (6) to assist the Librarian in the preparation of the book budget and in the allocation of funds for current acquisitions; (7) to encourage gifts and donations to the Library.

DALHOUSIE UNIVERSITY. A faculty advisory committee is appointed by the Faculty of Arts and Science.

UNIVERSITY OF GUELPH. A Library Council reports to the Senate. A policy statement approved by the Library Council and providing for a highly centralized library administration has not yet been presented to the Senate for ratification.

LAKEHEAD UNIVERSITY. A library committee, composed of the President, deans, and faculty members elected by the Senate, advises the Librarian.

LAURENTIAN UNIVERSITY. There is a Senate library committee, advisory to the Librarian, consisting of the President, the Librarian, the Dean of Arts and Science, and five Senate members representing the disciplines of History, Languages, Philosophy, Sciences, and Social Science. The chairman of the library committee of each federated college is an ex officio, non-voting member. The committee makes recommendations concerning the Library's objectives and general policies and represents the faculty in the apportionment of book funds.

UNIVERSITÉ LAVAL. A Library Council considers questions important to the direction of library development; the Council of nine professors is chosen on recommendation of the deans. The Librarian serves as Secretary.

MCGILL UNIVERSITY. A Senate Library Committee, appointed by the Senate, is advisory to the Librarian. Each faculty also has a library committee.

MCMASTER UNIVERSITY. There are two library committees chosen by the President through his Advisory Committee: (a) University Library Committee, composed of the President, Vice-President of Administration, Principal of University College, Dean of Arts, and Dean of Graduate Studies; (b) Science Committee, composed of the President, Vice-President of Administration, Principal of Hamilton College, Dean of Science, and Dean of Engineering. The committees are advisory, not administrative. They advise the Librarian on the allocation of book funds and from time to time scan the periodicals list to evaluate the selections.

UNIVERSITY OF MANITOBA. The faculty library committee, representing most faculties, many by deans, is appointed by the President. Its functions are to serve as an information exchange, give budgetary advice, and to determine policy.

UNIVERSITÉ DE MONCTON. A faculty library committee is composed of deans and directors.

UNIVERSITÉ DE MONTRÉAL. A Sub-Commission on Libraries includes the head librarian of the central library, three members (including the chairman) chosen by the Commission of Studies from among its members, and eight senior professors representative of various fields, also chosen by the Commission. The sub-commission is charged with the allocation of book funds.

MOUNT ALLISON UNIVERSITY. A library committee composed of four faculty members, the President (chairman), and the Librarian (Secretary) functions as a policy committee.

MOUNT SAINT VINCENT UNIVERSITY. A library committee, with advisory and informative functions, is composed of the deans, the Librarian, departmental librarians, and three appointed members of the faculty.

UNIVERSITY OF NEW BRUNSWICK. A faculty library committee, advisory to the Librarian, is appointed by the President in consultation with the Librarian for staggered terms. The committee is broadly representative of the University as a whole.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. A Senate-selected committee of nine (three members rotated yearly) is "advisory, exploratory, liaison." The specific functions of the Library Board are stated in some detail. "It shall be the duty and function of the Library Board to interpret Library policies to the Faculty and Faculty opinion to the University Librarian. The Library Board will (1) advise the University Librarian on all matters pertaining to the Library and its operation; (2) advise and, as it sees fit, make recommendations to the President through the Librarian on the following specific matters: (a) the formulation of general library policy in relation to the development of resources for instruction and research; (b) the allocation of the library vote to the various departments and services of the University on an equitable 'unit' basis; (c) the allocation of supplementary funds to the Library in order to meet special needs of Faculty departments; (d) the selection of new periodicals from those recommended by the Faculty; (e) the reproduction and dissemination of unique materials; (f) the development of a university-wide programme of library service; (g) decisions regarding the increase of library plant and/or the allocation of library space with reference to the needs of the departments of instruction; (h) the drawing up of rules and regulations for the best and proper use of the Library, to safeguard books, furniture, and other properties; (3) assist the Librarian in the preparation of the annual estimates of expenditure."

NOTRE DAME UNIVERSITY. An appointed faculty advisory committee's functions are to interpret the problems and policies of the Library to the faculty and to represent the faculty in the apportionment of book funds.

NOVA SCOTIA TECHNICAL COLLEGE. Four members, including the chairman, are elected by the faculty, with the Librarian as an ex officio member; the committee advises the President on library policy.

UNIVERSITY OF OTTAWA. A Senate library committee, named by the deans, is concerned with general policies and division of the budget.

PRINCE OF WALES COLLEGE. A faculty library committee, advisory in nature, is appointed by the administration.

QUEEN'S UNIVERSITY. A Board of Library Curators has 23 members, including 14 ex officio; it is "advisory to the Chief Librarian," but by instruction of the Principal its functions are currently being reviewed. The Board's membership includes the Principal, Vice-Principals, deans, the librarian, and eight faculty representatives of the various Faculty Boards.

ST. DUNSTAN'S UNIVERSITY. A committee of four members of the faculty, appointed by the President, advises on budgets and general policy.

ST. FRANCIS XAVIER UNIVERSITY. An advisory committee is composed of the President, a representative of each faculty, and the Librarian.

ST. MARY'S UNIVERSITY. The faculty library committee includes three members appointed by the President and two ex officio members; the committee is concerned with budget distribution, is consulted on major changes, and serves as liaison between faculty — students and the Librarian. In future, the committee may be elected by the Senate.

UNIVERSITY OF SASKATCHEWAN (Saskatoon). The library committee is composed of seven elected members, plus the President and Librarian ex officio. The committee's functions are advisory and liaison with faculty and students; it considers book and periodical estimates and allocates the book budget.

UNIVERSITY OF SASKATCHEWAN (Regina). There is a faculty library committee, whose functions and composition are currently under review.

UNIVERSITÉ DE SHERBROOKE. The committee is advisory concerning general library policies and for the allocation of book funds to departments.

SIMON FRASER UNIVERSITY. The library committee consists of the President, the Librarian, one member from each faculty, three Senate representatives, and the assistant librarians (non-voting). The committee is advisory on the budget, subject fund allocations, rules and regulations. Specifically, "The Senate Library Committee will advise the University Librarian in: (1) formulating policy in regard to the development of library resources for instruction and research; (2) allocating funds to the fields of instruction and research; (3) determining policies governing the loan of library resources and the other service aspects of the library system; (4) drawing up rules and regulations governing conduct in the library building. The committee will be charged with keeping the University Librarian informed concerning the library needs and expectations of instructional and research staffs. The Library Representatives of individual departments are concerned with forwarding to the Library the specific book and periodical requirements of their departments."

SIR GEORGE WILLIAMS UNIVERSITY. The faculty library committee, appointed by the University Council, the senior governing academic body, is composed of one member each from engineering, commerce, and science, two from arts, the Assistant Vice-Principal, and the Librarian. Its function is to provide guidance in policy decisions.

UNIVERSITY OF TORONTO. The statutes of the Senate specify that "There shall be a Library Council [a standing board of the Senate] which shall consist of the Chancellor, the President, the Principal of University College, the heads of the federated universities, a representative of each faculty and school to be nominated by the council thereof (at least six of these representatives being heads of their respective faculties or schools), the Secretary of the Senate, the Chief Librarian, and forty other members to be appointed annually by the President from among the members of the teaching and library administrative staffs of the University and federated universities and federated and affiliated colleges or from among the members of the Senate; and a majority of the Council members shall be members of the Senate . . . The powers and duties of the Council are to (1) make rules and regulations governing its proceedings; (2) subject to the approval of the Senate, formulate policies to govern the organization and use of library services within the University; (3) as occasion may arise, make recommendations to the Senate concerning the duties of the Chief Librarian; and (4) consider and report to the Senate from time to time upon such matters affecting library services within the University as the Council deems advisable." The President serves as chairman of the Council, and there is an Executive Committee of the Council consisting of a chairman and seven members appointed by the President.

Trent University. The library committee consists of the Librarian, the Comptroller, and a member for each faculty nominated by a faculty committee. The chairman is appointed on recommendation of the Senate Executive Committee. The library committee's function is advisory, especially on budget matters.

University of Victoria. The library committee consists of six members, named by the Senate and a student named by the Alma Mater Society, with the Librarian serving ex officio. The committee's terms of reference are stated as follows: "The Senate Library Committee subject to the authority of Senate shall advise and assist the Librarian in: (a) formulating a library policy in relation to the development of resources for instruction and research; (b) allocating book funds to the fields of instruction and research; (c) developing and administering a general programme of library service for all the interests of the University; (d) keeping the Librarian informed concerning the Library needs of instructional and research staff; (e) interpreting the Library to the University."

University of Waterloo. There is a Senate Library Committee, consisting of one member from each faculty or school, one representative from the federated and affiliated colleges, and two representatives from each of two subordinate standing committees: the Arts Library Committee and the Engineering, Mathematics, Science Library Committee, three representatives from the Library staff: the Chief Librarian and the heads of technical services and public services. The purposes of the Senate Library Committee are stated as follows: (1) To advise the Vice-President, Academic, and the Chief Librarian in matters relating to Library policy, budgets, general operating procedures, and services; (2) to become, in conjunction with the Divisional Library Committees, the mechanism of communication between faculty members and the library administration and to establish good liaison and co-operation between the Library and all other segments of the University; (3) to concern itself with long-range plans for the development of the University Library and its collections, in order to ensure even, well-planned growth and to avoid unexpected pressures.

Waterloo Lutheran University. A committee varying in size from three to five plus the Librarian is nominated by the Faculty Nominating Committee. The committee assists and advises the Librarian in budgeting and related areas.

University of Western Ontario. A University Library Council has 25 members: Vice-Chancellor, three Vice-Presidents, three Deans, the Librarian, and 17 elected members representative of various faculties within the University. Its functions are defined to be: "(1) To review and make recommendations on the University library system and to formulate current policy and long range plans for the development of the system, including physical facilities, acquisitions, services, priorities, etc.; (2) to review and to make recommendations on the total library budget as to apportionment among the several divisions of the library, including reading rooms and the various subject fields within the University."

UNIVERSITY OF WINDSOR. A Senate Library Committee consists of the following elected representatives: two from the humanities, two from social sciences, two from mathematics and science, one from business administration, and one from engineering, all chosen annually. Ex officio members are the President, Vice-President, and Librarian (chairman). The committee considers and reports to the Senate on general policy and concerns itself with collections to support the curriculum.

YORK UNIVERSITY. The Senate has established a Standing Committee on Libraries which keeps the Senate informed on the development of the University Library and advises the Director of Libraries.

Common threads run through these various faculty library committees, despite their seeming diversity. One highly commendable aspect is that, almost without exception, their functions are defined as advisory, rather than administrative or executive. It is a well-established principle of sound administration that a committee should not attempt to administer any organization. The committee may establish policies and guidelines, but should rely upon a competent executive to implement its agreed-upon objectives. Faculty library committees come into being through several different channels, though the trend seems to be to have them elected by university senates, a device which may ensure better representation of faculty points of view. In practically all cases, it is obvious that the committees are serving an important liaison function between the faculty and the library staff. A similar function is served by student members, found in a number of institutions.

Statutes on Libraries

It appears to be the exception rather than the rule for the universities to have formal written statutes governing their libraries. Several libraries reported having such statements under consideration, but not yet adopted. The general statutes of Laval, McGill, Montréal, and Toronto contain a number of references to the place of libraries in their organizations. The

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University Library Committee at Sir George Williams issued in 1965 a detailed statement on "The Role of the Library in Sir George Williams University," but apparently this document does not have the force of a formally-adopted body of laws.

Two libraries, those of York University and of the Memorial University of Newfoundland, have had statutes adopted for their governance. The statement for York reads as follows:

York University Library Statutes

> The Director of Libraries is responsible for the staffing and maintenance of the University Library, which consists of all the collections of books and related materials in the possession of the University. He is responsible for the selection, acquisition, processing and servicing of all materials added to the University Library. Departmental or special libraries are established on the recommendation of the Director of Libraries to the Vice-President and the President and with the approval of the Board of Governors. All books and other materials given to such libraries are assigned to the custody of the University Library. The approval of the Director is required for library gift funds or materials which have terms or conditions restricting their disposition. The Director nominates for appointment librarians or curators of special or departmental libraries who will be under his general supervision. He is responsible for the preparation of a budget for the University Library and submits his budget to the Vice-President and to the Vice-President (Finance).

Memorial University of Newfoundland Library Statutes

The written statement on "The Government and By-Laws of Memorial University Library" of Newfoundland is fuller. It reads:

> Inasmuch as the operation of a University Library entails a considerable measure of administrative responsibility involving the handling of substantial sums of money and a complex relationship between itself and all faculties and officers of the University, a plan of library government must necessarily be clearly formulated if the Library is to provide, on an equitable basis, an efficient educational function. These by-laws are offered as an attempt to avoid duplication of effort, to limit unnecessary expense and, as much as possible, to attenuate those misunderstandings which inevitably develop where responsibilities overlap or where policy is not clearly formulated. They are not set down as static, unchanging, and inflexible codifications of policy but, rather, as a foundation of a University Library programme.

Lines of Authority

1. The Librarian's function is under the jurisdiction of the University President to whom he is directly and solely responsible.
2. By the "Act Respecting the Memorial University of Newfoundland" (R.S.O. 1952, C. 108) The Board of Regents of Memorial University of Newfoundland has "the power . . . to appoint . . . the Librarian . . ." (Section 36 f) and the Senate has "the duty . . . and power . . . to make rules and regulations for the management and conduct of the Library" . . . (Section 54, r). The Librarian and graduate professional librarians on his/her staff have academic status.
3. By patterns generally adopted in North American Colleges and Universities, these duties and powers are delegated to a Library Board composed of Faculty members who represent the major academic areas of the University. This body is convened at least quarterly and is asked to consider the Librarian's proposals relating to Library administration and to offer advice to the Librarian on such matters as are set forth below under the heading "Functions of the University Librarian".

Functions of the University Librarian:

1. All books, periodicals, manuscripts, charts and facsimiles together with the machines necessary for the use of such library resources shall, where purchased by institutional funds, become an integral part of the University Library collection and come under the direction of the University Librarian who is responsible for their preservation and availability to the academic community.
2. All budgets expended for the purchase of items listed above, or for library purposes generally, shall be consolidated and expended under the direction of the University Librarian who may seek the advice of the Library Board in the matter of annual estimates of expenditure.
3. By way of interpreting the resources of the Library to patrons the University Librarian shall offer, with the assistance of his staff and other lecturers, a series of formal lectures to second-year students of approximately five hours' duration. He shall be prepared to offer, upon request, instruction to senior and graduate students on the use of library resources as these relate to scholarly research, documentation, and the preparation of scholarly bibliographies.
4. It is the University Librarian's responsibility to prepare an adequate catalogue of, to arrange, and to preserve all library materials described above.

5. The University Librarian will report annually to the Senate through the President of the University on his stewardship and report upon the growth of separate collections of library material and upon the distribution of his allocated budget.
6. The University Librarian shall, as Secretary of the Library Board, prepare minutes of meetings for distribution to members of the Library Board and to Heads of Faculty departments as information to all Faculty members. The Librarian shall, with the assistance of the President and the Chairman of the Library Board, prepare and circulate an agenda several days before the convening of the meetings.
7. The University Librarian will advise on the appointments, for the approval of the Board of Regents through the President, of all Library personnel including professional, clerical and student assistants.

Adoption of such statutes, defining the responsibilities and authority of the librarian and the place of the library in the university organization, is recommended to all libraries which lack them. They may often protect the librarian in the solution of difficult problems and enable him to withstand pressures for undesirable administrative changes. If soundly based, the rules will substantially strengthen the library's organization.

It is enlightened policy, also, to include the librarian and appropriate members of the library staff in university planning and curricular development; in nearly all cases, the library will be affected by decisions reached in these matters, and the librarian may be in a position to supply vital information.

Centralization vs. Decentralization

On every university campus discussion goes on concerning the relative merits of centralized versus decentralized organizations. Practices vary from completely centralized systems, with all library operations in one building, to a central library supplemented by dozens of departmental libraries located elsewhere. Each plan has definite advantages and disadvantages.

The chief argument in support of a decentralized library organization is that books are placed in immediate proximity to faculty members and students working in particular subject fields, thereby saving time in travelling to and from the central library building. The case is strongest for such collections in the laboratory sciences, where experiments in progress may require consultation without delay of certain handbooks, journals, or other reference sources.

The arguments favoring centralization in most other situations are convincing. Among the points supporting a policy of centralization are the following:

1. Numerous departmental libraries demand extensive duplication of books and periodicals, an expense which only large and wealthy institutions can afford. On the other hand, a single copy in a central library may be sufficient to serve all departments.
2. Modern scholarship tends toward extreme specialization, but there is also apparent an opposite trend, toward interdepartmental research, with the result that fields of knowledge overlap and there is scarcely any discipline which has no relation to other disciplines. In the sciences, for example, we have such combinations as bio-chemistry, bio-physics, bio-psychology, bio-climatology, chemical engineering, and psychosomatic medicine, and agriculture is concerned with botany, zoology, chemistry, physics, entomology, parasitology, engineering, veterinary medicine, and practically every other branch of science and technology, as well as a number of the social sciences. In the humanities and social sciences, the interrelationships are equally close. It is therefore impracticable to separate out a body of literature and to maintain that this material is of interest to only one department. The needs of all departments can usually best be served by centralized collections, where there is access both to the literature of a special field and to every other subject of possibly related interest.
3. Though there may be added convenience to a single department in maintaining a collection of specialized literature relating to its own needs, segregated from other collections, library users as a whole, faculty and students, have their needs best met in a central building, where the institution's library resources are predominantly concentrated. Often, departmental libraries are closed when books are wanted from them, a department may consider the books its exclusive property and be reluctant to make them available to students and faculty members from other divisions, and it is inconvenient for a person concerned with more than one subject to have to go to several places to locate the materials that he needs. As expressed by one faculty member, "A scattered library cannot serve a university; it favors and fosters departmental provincialism; it penalizes the best men, who always range beyond the shelves of their specialty, by making them run the length and breadth of the campus to consult or to borrow the books they need from a variety of departmental collections."

4. Professional librarians are in short supply, and will remain so for years to come. A university library's clientele can probably best be served by concentrating its professional library personnel in a central library, where they can aid all faculty and students, instead of placing them in departmental libraries to serve a small number of individuals.

Reliable studies comparing the cost of centralized and decentralized library service are lacking, probably because there are so many variable factors having a bearing on departmental library costs. Among them are these: (a) Is every departmental library to have a departmental librarian in charge, or will it be staffed by clerks and student assistants? (b) Will the departmental library remain open as many hours as the central library? (c) Will the book and periodical collection in the departmental library be duplicates of material in the central library, and to some extent in other departmental libraries? (d) In relation to the space needs of classrooms, laboratories, offices, etc., is it economical to have large blocks of space in non-library buildings assigned to library functions, i.e., to departmental libraries?

Ideally, if a university is to have departmental libraries, it should maintain the same standards for those libraries as for the central library in such matters as staff, schedules, and physical facilities.

Whatever policies are adopted in reference to centralization or decentralization of library collections, the following rules should be made mandatory:

1. Books and other library materials should be purchased or otherwise acquired through the library's acquisition department, and not by individual departments.
2. All materials should be classified, catalogued, bound, or otherwise processed by the central library.
3. Every book, pamphlet, periodical, or other publication received and preserved should be recorded in the central library catalogue.
4. Every book acquired by the university or any of its departments should be considered a part of the library's collections.
5. Departmental libraries and librarians should belong to the central library organization, and be under the supervision of the chief librarian or of his representative.

There are other criteria that ought to govern the establishment and administration of a departmental library. To avoid excessive fragmentation, a branch library should be considered only when a large number of students and faculty members are to be served, and usually working in a geographic area remote from the central library. The adequacy of space in the main library building is sometimes a deciding factor in questions of departmentalization. Whatever the local situation may be, central planning and direction are necessary to achieve the best use of such financial and other resources as a university can allocate for library services.

There are possible compromises between complete centralization and excessive departmentalization of the library organization. One is the concept of divisional libraries each of which would serve a number of related departments. The University of British Columbia, for example, is planning "area" libraries, especially in the sciences. Dalhousie University is projecting two divisional libraries, one covering the physical sciences and the other the biological or life sciences. This type of organization recognizes the interrelationships of fields, requires less duplication of collections and fewer staff members, and in general is more economical to operate than numerous departmental libraries.

A second device to reduce the pressures for full-fledged separate departmental libraries is to provide office or laboratory collections, where the need can be demonstrated. A number of universities have experimented successfully with plans for setting up small collections of this type, containing perhaps 500 to 1,000 volumes each of the most used handbooks, journals, and similar reference material. The University of Wisconsin Library has a rule that such collections shall not be permitted to exceed 1,000 volumes in size. The University of Windsor has special funds, outside the regular library budget, of $300 per department for the purchase of material to keep the office or laboratory collections up to date.

Still another principle for reducing the demand and need for excessive departmentalization is to establish a policy of free interchange of material among all libraries on a campus. The concept of pooling collections for the use of the entire university community is basic to the whole development of university libraries.* A daily delivery service among libraries and offices, providing for maximum mobility of collections, and extensive use of photocopies will remove the principal inconveniences of both centralization and decentralization. At best, university library administration is a series of compromises, but there should always be kept in mind, as the prime consideration, the greatest good for the greatest numbers, expediting in every way possible the work of the individual scholar and student.

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*This principle is most seriously violated, among the Canadian university libraries, at the Université de Montréal, where branch libraries are largely autonomous, and frequently limitations are placed on their use by "outsiders," e.g., instructors and students from other faculties.

Departmental and Divisional Libraries

A majority of Canadian university library systems include one or more departmental libraries. The list is as follows:

ACADIA UNIVERSITY: biology, chemistry, geology, physics

UNIVERSITY OF ALBERTA: education, law, medicine, general science, physical science, undergraduate library

BISHOP'S UNIVERSITY: science

UNIVERSITY OF BRITISH COLUMBIA: anthropology and sociology, architecture, Asian studies, chemical engineering, chemistry, civil engineering, classics and Romance studies, commerce, computing centre, economics and political science, electrical engineering, English, geology and geography, German, history, Institute of Fisheries, Institute of Labour Relations, librarianship, microbiology, pharmacology, pharmacy, philosophy and religious studies, physics, psychology, biomedicine, curriculum laboratory, law, mathematics, social work

DALHOUSIE UNIVERSITY: science, biology, chemistry, law, mathematics, medicine, pharmacy, education

UNIVERSITY OF GUELPH: agricultural economics, animal husbandry, apiculture, botany, chemistry, crop science, dairy science, engineering, English, extension education, home economics, horticulture, microbiology, nutrition, physics, physical education, poultry, soil science, veterinary medicine, zoology

LAURENTIAN UNIVERSITY: science

UNIVERSITÉ LAVAL: agriculture, commerce, forestry and geodesy, medicine, music, science, theology

MCGILL UNIVERSITY: architecture, botany, commerce, dentistry, divinity, engineering, Islamic Institute, law, library science, medicine, Osler Library, nursing, social work, zoology and ornithology

MCMASTER UNIVERSITY: Science and engineering

UNIVERSITY OF MANITOBA: architecture, art, education, engineering, extension, dentistry, medicine, pharmacy, law, music

UNIVERSITÉ DE MONCTON: education and psychology

UNIVERSITÉ DE MONTRÉAL: architecture, library science, law, dentistry, hygiene, medicine, music, pharmacy, philosophy, sciences (6), education, social sciences, theology, commerce

MOUNT ALLISON UNIVERSITY: chemistry, geology, physics and engineering

MOUNT SAINT VINCENT UNIVERSITY: scholastic divisions, College Education Department

UNIVERSITY OF NEW BRUNSWICK: biology, civil engineering, chemical engineering, chemistry, electrical engineering, forestry, geology, mathematics, physics

MEMORIAL UNIVERSITY OF NEWFOUNDLAND: education

UNIVERSITY OF OTTAWA: medicine and science, library science, civil law, common law, dietetics, nursing, psychology, social sciences, religion

QUEEN'S UNIVERSITY: civil engineering, chemical engineering, chemistry, electrical engineering, local government, medicine (including bacteriology, psychiatry, pharmacology, drug research), biology, geology, fine arts, music, theology, mining and metallurgical engineering, physics, mechanical engineering, biochemistry, law, industrial relations

ST. FRANCIS XAVIER UNIVERSITY: science, geology, biology, hospital

UNIVERSITY OF SASKATCHEWAN (Saskatoon): medicine, veterinary medicine, geology, physics, chemistry. (Regina): education, including fine arts

UNIVERSITÉ DE SHERBROOKE: law, medicine, science

SIR GEORGE WILLIAMS UNIVERSITY: science and engineering, geography

UNIVERSITY OF TORONTO: aerospace, anatomy, architecture, fine arts, astronomy, biochemistry, botany, business, chemical engineering, chemistry, child studies, computer science, criminology, dentistry, East Asian studies, education, engineering, Far East, fine arts, forestry, geography, geology, geophysics, Great Lakes research, history, food sciences, hygiene, law, library science, maps, mechanical engineering, medicine, metallurgy, mining engineering, music, nursing, pathology, pharmacy, physical education, physics, physiology, political economy, psychiatry, Royal Ontario Museum, social work, zoology

UNIVERSITY OF VICTORIA: curriculum laboratory

UNIVERSITY OF WATERLOO: engineering, mathematics, and science

UNIVERSITY OF WESTERN ONTARIO: business, education, engineering, health sciences (medicine and nursing), law, music, sciences

Not included in the above listing are numerous libraries of federated and affiliated colleges and schools.

In size, the departmental libraries of these several universities range from collections of less than 1,000 to nearly 100,000 volumes. Obviously, many are no more than small working collections set up for the convenience of a limited number of faculty and students. It would be uneconomical to staff them with professional librarians or to make their contents available for more than a short time each day. The libraries relate predominantly to science and technology, or to professional fields, such as law, architecture, business, education, and social work.

Unless there are valid geographical reasons against mergers, there would appear to the outside observer to be sound arguments for consolidating some of the scattered collections into divisional libraries. The University of Toronto, for example, lists some seven engineering or engineering-related libraries, and ten in medicine or medically-related fields. Queen's University has five engineering libraries; the University of Guelph about ten libraries in agriculture or closely related areas; and there are similar over-lapping situations in several other universities.

Summary

Every university should have a written statement of policy to guide the operation of its libraries, showing the relationship of the librarian to the general administration, defining the library's resources, centralizing authority for library administration, stating the duties of the librarian, providing for a faculty advisory committee, and placing the library staff in its proper setting in the university organization.

The chief librarian should report directly to the president of the institution or to a vice-president for academic affairs to whom the president has delegated authority. Library administration should be centralized under the chief librarian or director of libraries, even though service agencies, such as departmental and divisional libraries, may be decentralized.

The librarian and appropriate members of the library staff should be represented in committees concerned with university planning and curricular development.

Faculty library committees should be advisory in nature, representative of major areas of the university, rotate in membership, aid in every way feasible the development and growth of the library, and serve to interpret the library to the faculty as a whole and to students.

Written statutes governing the library are desirable to strengthen the library organization by defining the responsibilities and authority of the librarian and the place of the library in the university organization.

Centralization of library resources and services provides the most economical and generally the most efficient type of organization, eliminating unnecessary duplication, bringing related materials together, and making most effective use of professional librarians. If, as a matter of policy, the library's resources are decentralized, all materials should be procured centrally, catalogued centrally, recorded in the central catalogue, be considered the property of the university, and departmental libraries and librarians should belong to the central library organization.

The need for separate departmental libraries can be reduced by placing small working collections in laboratories and offices, providing frequent delivery service among libraries and offices, insisting upon maximum mobility of collections, and making photocopying services freely available. Whenever practicable, divisional libraries, combining collections in a number of related subject fields, are preferable to departmental libraries limited to one area.

3. Technical Services

One of the essentials of effective library service is sound technical operations, the chief ingredients of which are good book selection procedures, prompt receipt of materials ordered, and efficient organization of materials for use immediately after their acquisition. The present chapter is concerned, therefore, with the machinery whereby books, periodicals, pamphlets, and other materials are selected, acquired, catalogued, bound, classified, and prepared for use. Photographic services, which have come into greatly increased use in recent years, are also included in this area of librarianship. Well-organized technical services are basic to making library materials available quickly at the least expense.

Book Selection

The development of a great research library has a certain mirage quality, comparable to approaching infinity. The goal may be approached but never attained. An ideal research library, if one can conceive of such perfection, would contain a complete record of human thought, emotion, and action, without restriction as to language, date, place, or form of publication. In brief its collections would have approached universality, comprising everything. Faced with the hard realities of practical library administration, however, including the inevitable limitations on funds, space, staff, and availability of materials, what are the elements in a reasonable acquisition policy for a university library?

The first consideration, naturally, is the clientele to be served: faculty, staff, graduate and undergraduate students, and to a certain extent a general public. The undergraduate at the freshman-sophomore level will be adequately served by as few as 5,000 titles of selected books and periodicals, especially if a sufficient number of duplicates are provided. None of the new separate undergraduate libraries which have proliferated in American universities in late years contemplate total collections much in excess of 100,000 volumes.

Moving up the scale, however, the demand grows. The better upperclassman, the honor student, and beginning graduate student call for a wide range of basic texts, complete collections of the works of important authors, selections from the writings of authors of secondary importance, a well-rounded collection of journals—general and special, current and retrospective—and basic bibliographical tools. Library holdings of a quarter of a million volumes, if carefully chosen, would meet the minimum needs of this group.

The next stage—involving doctoral candidates, research staff, and faculty members—brings us into the realm of fundamental research collections. Here university libraries are expected to provide all significant or useful texts, published collections of primary sources, an extensive assemblage of critical and biographical works, pamphlets, newspapers, government publications, the fullest possible list of journal sets, bibliographical compilations in all fields of pertinent interest, and in some fields manuscript collections. For such purposes as the foregoing, a general university library should probably possess a minimum of one to one-and-a-half million volumes.

An excellent example of an acquisitions policy statement, incorporating the ideas outlined above and other important points, was adopted by the University of Calgary in 1965. The drafting and official adoption of similar policy statements by university libraries elsewhere would do much to clarify their aims and objectives.

Role of the Faculty and Library Staff

In attacking the multiple problems of developing the library's resources, the full co-operation of the university administration, faculty, library staff, and students must be enlisted, and adequate financial support assured. The actual building of an outstanding research library involves two key groups: the faculty and the library staff. Both have essential parts to play, a fact not infrequently overlooked. While much of the work of book selection in a university library is carried on by faculty members knowledgeable in specialized fields, librarians should also participate actively in the expansion of resources. On the librarians, for example, falls the chief responsibility for choosing materials of broad scope, such as general reference works, comprehensive bibliographies, general periodicals, and similar titles. Departmental librarians often become expert in the literature of their special areas.

It is not an uncommon practice in college and university libraries for the staff to abdicate responsibility to the faculty for book selection and collection development. Laboring under the delusion that only scholarly specialists are competent to decide what books and journals are worth adding, the librarian assigns practically all funds to teaching departments and treats his acquisition staff as order clerks. The consequences may well be disastrous. In the future, librarians will be able to rely less on faculty members for aid in book selection, because academic careers are being built increasingly not on teaching but upon research and publication and foreign assignments, with little time left over for the ordering of books. It follows, therefore, that as acquisition programmes grow larger, librarians must take over full supervision and responsibility for selection. One other possible solution is to give credit and recognition, i.e., lighter teaching loads, to faculty members for assisting in developing library collections.

The situation described above is causing a number of university libraries to appoint expert bibliographers and subject specialists to their staffs. Following is a review of book selection practices in a number of Canadian university libraries:

ACADIA UNIVERSITY. "The faculty is responsible for the selection of books of interest to the work of their departments; selection of reference works and books of general interest is chiefly the responsibility of the Library staff."

UNIVERSITY OF ALBERTA. "The Library has had a Selections Department for a year now and plans to assume more of the responsibility for initiating orders."

UNIVERSITY OF BRITISH COLUMBIA. Each faculty department has an annual allocation for the purchase of books, plus special funds. Complementing the faculty, "U.B.C. has four full-time, and one part-time, bibliographers on the staff. In addition the Assistant Librarian and Heads of Divisions are actively engaged in book selection. Further, the Fine Arts Division selects and orders books in all fields for faculty."

UNIVERSITÉ LAVAL. The Library staff has specialists in geography, law, economics, chemistry, agriculture, engineering, and social sciences. These specialists do preliminary selection through reviews and other sources of information and then check their decisions with faculty members—apparently a very workable plan.

MCGILL UNIVERSITY. Subject specialists are being appointed to the library staff for book selection; these individuals are expected to collaborate closely with the faculty.

MCMASTER UNIVERSITY. "The responsibility is divided between Faculty and Librarian (Departmental Funds vs. General Funds)."

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. "Faculty has a major responsibility; however Acquisitions Specialist as well as all divisional heads of the Library are involved."

UNIVERSITY OF SASKATCHEWAN. "About half the allocation for monographs is under the control of teacher departments, but over all this is only about one-fourth of the total spent on library acquisitions."

SIMON FRASER UNIVERSITY. The Library has four subject specialists on the staff, two for the social sciences and one each for the humanities and sciences.

SIR GEORGE WILLIAMS UNIVERSITY. "Reference librarians are assuming an increasing role" in book selection.

UNIVERSITY OF TORONTO. The Library has a corps of book selectors who share responsibility with the faculty.

YORK UNIVERSITY. "Book selection and collection building are shared responsibilities of the faculty and librarians and bibliographers. There are subject bibliographers in the Acquisitions Department for the humanities, social sciences, and sciences."

Several other libraries reported being in a state of transition from more or less complete dependence on faculty members for selection to at least a share of the responsibility.*

The freedom of librarians to participate actively in collection building is governed to a large extent by the methods used in allocating book funds. In this area, practices are at considerable variance. To note two extremes, Simon Fraser University assigns 90 percent of its book appropriations to teaching departments, retaining only 10 percent for general library purposes, while the University of Calgary Library makes no departmental allocations. If allocations are to be made, and in certain ways they are desirable, a generally sound principle is to set aside about 25 percent of the total book budget for grants to departments and to retain 75 percent in a general, unassigned fund. The general fund would normally absorb the expense of periodical subscriptions, binding, large sets, reference works, bibliographies, some retrospective research material, duplicates, and books for general reading. The proposed division prevails at the University of Saskatchewan: 75 percent, general library; 25 percent, departmental allocations. At Brock University, 60 percent is retained by the Library and 40 percent goes to departments. L'Université Laval uses the following breakdown: 28 percent, general works; 23 percent, sciences; 49 percent, humanities and social sciences. The University of Alberta allocates 75 percent of its book funds to departments. The University of Manitoba Library is proposing a somewhat different approach: reserve 30 percent for general library purposes, 35 percent for departmental allocations, and set aside 35 percent for particular departments, on a rotating basis, for research development. These examples are illustrative of the diversity of policies.

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*For a survey of current practices in this field, see: Haro, Robert P. "Book Selection in Academic Libraries," *College and Research Libraries*, 28 (March 1967), p. 104-06; and Byrd, Cecil K. "Subject Specialists in a University Library," *College and Research Libraries*, 27 (May 1966), p. 191-93.

Standing or Blanket Orders

The problems of book selection are being met by another device which is being increasingly adopted by university libraries—placing standing or blanket orders. The scheme has numerous advantages, if dealers, publishers, and categories of material are chosen with care. The expensive processes of selection and the placement of orders for individual titles are eliminated, the books are received promptly after publication, and discounts are as large or larger than for books ordered in the traditional manner.

The most popular group of publishers to be covered by standing orders is university presses. Several Canadian university libraries have arranged to receive the publications, generally scholarly, of these organizations. An American dealer, Richard Abel of Portland, Oregon, who specializes in standing orders for U.S. and European books, has contracts to supply current titles to the University of Alberta, University of British Columbia, University of Saskatchewan, Simon Fraser University, University of Victoria, and other institutions. Another organization, the Publishers' Academic Library Service, covers British publications and serves 18 Canadian university libraries. Appended to the present chapter is a list of publishers whose scholarly publications the University of Alberta Library covers by blanket orders, starting with 1967 imprints — a programme expanded from standing orders for U.S. university press books, begun in 1966. The University of British Columbia has standing orders covering current imprints of some 20 countries. The University of Windsor uses the International University Booksellers organization in New York for 68 American and British publishers, covering books in the pure and applied sciences only. The areas of interest are carefully defined. Starting July 1, 1967, Windsor initiated a similar programme for 12-15 departments in the humanities and social sciences, but is using Library of Congress proof slips for selection purposes. Arrangments are under consideration with Richard Abel, Blackwell, Nijhoff, and other dealers for foreign books. The University of Toronto Library is depending upon dealer selection to cover many foreign countries. (Exceptions are music and fine arts, for which specific orders are placed). McMaster University Library places blanket orders for U.S. books with Homer Roberts, book-seller located in College Park, Maryland, who supplies Library of Congress proofsheet cards with the books; McMaster has the same arrangement with Blackwell and Rota in England, to supply British books. Blanket order systems are being planned by the University of Victoria and York University libraries.

At the University of British Columbia and Simon Fraser University, all books received from Richard Abel are considered as being sent on approval. The books are held in a special section of the library for a specified length of time, and there they are subject to faculty inspection. Any rejected titles are returned to the dealer. A different approach is used by the University of Calgary: the dealer sends slips descriptive of the books and selection is made in the library on the basis of the descriptions.

In defense of blanket orders, beyond the advantages already cited, it should be pointed out that the larger a university library becomes, the less selection is involved in its development. Not all fields are covered comprehensively, of course, but in areas of primary concern to the institution, the library is likely to find itself engaged in *collecting* not *selecting*. Completeness becomes the main goal.

Special Acquisition Problems

Without exception, the Canadian university libraries are confronted with special problems in their acquisitions activities. According to 1965 statistics, 3,781 book titles (of which 2,839 were first editions) were issued in Canada, compared to 28,595 for the United States, 26,358 for the United Kingdom, 21,351 for France, and 25,994 for West Germany during the same year. This means that Canada is primarily an importer of books, and from that fact stems a number of dilemmas: slow delivery service on books ordered for Canadian libraries; limited stocks held by Canadian book dealers, because they cannot rely upon orders from libraries, more inclined to place orders abroad; high prices, caused by such factors as transportation costs, markups on books from Britain and the United States, and a current discount on Canadian dollars spent abroad; and difficulties caused by customs interpretation on imported books. As a consequence, all types of Canadian libraries are handicapped and penalized in their growth.

There are few obvious solutions and the problem as a whole deserves intensive study. Possible answers include more Canadian editions of books published abroad; encouragement to Canadian dealers to persuade them to hold larger stock of current books; pooled purchasing arrangements among libraries to obtain better discounts; more resort to standing orders to speed up deliveries; concentration of orders with a few selected foreign dealers, chosen on the basis of the guaranteed quality of their service to libraries.

The recent organization of the Antiquarian Booksellers Association of Canada, which held its first meeting in Montreal in July 1967, may be helpful in organizing the market for more effective service for rare, second-hand, and out-of-print books.

Other Aspects of Acquisitions

The foregoing discussion has been concerned primarily with the machinery for acquiring current, in-print publications. The difficulties in procurng antiquarian, out-of-print, second-hand books are equally acute. In this area, the most satisfactory arrangements generally are between individual libraries and dealers. Libraries which are specializing in certain fields can make their interests known to one or more reliable dealers, and expect to receive preferential treatment, such as advance mailing of catalogues, especially if the library generates enough business to justify a dealer's time and effort. Prompt checking of catalogues is essential; delays mean that desirable items are nearly always sold before receipt of orders. For highly important material, cables or telephone calls are justified.

A time-saving device used by the McMaster University Library is to check second-hand book catalogues and then return the catalogues to the dealers, asking which of the items checked are still available, without taking time to complete order forms in advance. Orders are then placed for the books being held by the dealers.

Use of Counterpart Funds

In 1961, speaking at the Canadian Industrial Editors Association National Conference in Ottawa, Dr. James A. Gibson, now President of Brock University, made the following remarks:

> There is a further way in which our contributions to development funds could serve a dual purpose, by bringing back to Canada some of the riches of the culture of the East to which our universities, at least, are becoming increasingly alert. I have in mind especially India and Pakistan, though China and some other Asian nations might gradually be brought into comparable arrangements. If we diverted even a modest fraction of these "counterpart funds" into the purchase of books to be brought back to Canada, our university and other specialist libraries would be immeasurably enriched at a very moderate cost. The classics of Indian and Islamic literature and philosophy and religion and art, whether in certain original languages or in the translations into English and French which UNESCO has systematically encouraged, would become available to a mature constituency on a scale at once wider and more generous than is possible at the present. The connection between Canadian wheat and the novel *Pathar Panchali* may not be immediately obvious, but I think it could be a deliberate and a rewarding connection.

The plan envisioned by Dr. Gibson has since become a reality. The University of British Columbia, University of Toronto, McGill University, and the National Library of Canada expect to receive library materials from India through the use of counterpart or blocked currency funds. A similar programme in the United States, under Public Law 480, operated by the Library of Congress, is bringing publications from a number of countries: India, Pakistan, Indonesia, United Arab Republic, Israel, Poland, and Yugoslavia, for distribution to a group of American university libraries. The feasibility of expanding the Canadian programme, also, to other countries should probably be explored.

To a considerably greater extent than their colleagues in the United States, Canadian university librarians travel abroad on book-collecting expeditions. Numerous instances were mentioned of librarians or faculty members going on missions to New York, London, Paris, the Middle East, and other points to acquire extensive groups of books and journal files and to establish personal contacts with dealers. When a library has had large sums of money to spend within a brief period of time, the procedure has been highly productive, though it hardly allows for a programme of careful, systematic development. Long-range planning calls for strong financial support over a period of years.

Standard Book Lists

In measuring quality in college and, to some extent, in university libraries, there is an increasing tendency to think in terms of standard lists. There are values as well as dangers in the practice. Standard lists, critics maintain, make all libraries alike, discriminate against good books not fortunate enough to be listed, and soon get out of date. Despite these acknowledged limitations, lists of books, periodicals, and other materials selected and recommended by experts and specialists are useful in the development of library collections. They help to ensure against serious omissions.

A majority of standard lists were prepared with college rather than university library needs in mind, but the titles listed generally constitute basic collections for the university and research library.

At least two-thirds of the Canadian university libraries reporting checked one or more bibliographies for acquisition purposes. The University of Alberta Library, one of the most active, listed 30 checking projects done there, as examples. The University of Toronto is equally energetic and noted, in addition to a detailed record of works completed, that it "is currently checking at least a dozen more standard lists." A compilation of such lists, of possible value to individual libraries which wish to set up systematic acquisition programmes, is contained in the Toronto Public Library's *The Scope of Toronto's Central Library,* by Lee Ash (Toronto: Toronto Public Library, 1967), Appendix A, "Bibliographies Selected by Staff for Checking Against TPL Holdings," p. 110-20.

There is clearly a need for the compilation and publication of book selection tools specifically adapted to the needs of Canadian libraries, especially because of the bilingual nature of the country. This may be a proper task for joint action by the AUCC and CACUL.

Exchanges

Frequently, exchange systems are a fruitful method of acquiring library materials. There are two principal types of exchange: (1) using the university's own publications—journals, books, study series, etc.—to exchange for the publication of other institutions, such as universities, learned societies, observatories, academies, and museums; (2) the exchange of duplicate materials with other libraries. Ordinarily, both plans are barter arrangements, and no money changes hands. Through active promotion, a library may acquire a considerable amount of useful material in this fashion without any sizeable expenditure of funds. Libraries which are carrying on exchange programmes reported as follows:

UNIVERSITY OF ALBERTA. Exchange relationships with 200 institutions using *Alberta Law Review, Questiones Entomologicae, Alberta Journal of Educational Research,* and Faculty of Agriculture publications. Also exchanges duplicates.

UNIVERSITY OF BRITISH COLUMBIA. Exchanges *Journal of Education* of the Faculty of Education, Institute of Fisheries *Museum Contributions,* U.B.C. Library *Reference Publications,* and three published lecture series. The Library maintains 19 subscriptions to Canadian journals in exchange for publications from 11 foreign libraries. A rather extensive programme is carried on for duplicates through the U.S. Book Exchange and individual libraries.

CARLETON UNIVERSITY. Exchanges its *Geological Papers* and selected list of current materials on Canadian public administration and political science. The Library is a member of the ACRL Duplicate Exchange Union.

UNIVERSITÉ LAVAL. Through exchanges with the journals/published by the "Presses de l'Université Laval," the Library receives about 3,000 periodical titles yearly. Through dealings with the U.S. Book Exchange and the ACRL Duplicate Exchange Union, 17,493 issues of journals were distributed from Laval in 1965-66.

McGILL UNIVERSITY. The Library purchases McGill publications at reduced rates for exchanges with about 100 institutions.

McMASTER UNIVERSITY. The Library uses the Whidden Lectures for exchange.

UNIVERSITY OF MANITOBA. The Medical Library exchanges the *Manitoba Medical Review*. During the past year it sent out and received several thousand duplicates, mainly through the Medical Library Exchange.

UNIVERSITÉ DE MONTRÉAL, The Library carries on duplicate exchanges with about 460 institutions, in 1965-66 receiving 1,750 periodicals and sending out 10,015 items.

MOUNT ALLISON UNIVERSITY. The Library exchanges a lecture series, a summer institute series, and other publications.

UNIVERSITY OF NEW BRUNSWICK. The Library uses several series of addresses and lectures for exchange with 130 institutions, and also carries on duplicate exchanges.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. The Library can obtain special studies, reports, faculty papers, commission reports, etc. for exchange.

NOTRE DAME UNIVERSITY. The Library carries on exchanges with about 340 institutions through the ACRL Duplicate Exchange Union.

UNIVERSITY OF OTTAWA. The Library has exchange arrangements with 156 institutions for the *Revue de l'Université d'Ottawa* and other series. There is also an active programme of duplicate exchanges.

QUEEN'S UNIVERSITY. The Library exchanges *Douglas Library Notes, Queen's Quarterly, Queen's Publications in Pure & Applied Mathematics,* and student publications with about 60 institutions.

UNIVERSITY OF SASKATCHEWAN. The Library purchases the *Canadian Journal of History* for exchange. The Regina Campus buys the *Wassana Review* for the same purpose.

SIR GEORGE WILLIAMS UNIVERSITY. The Library has an active duplicate exchange programme. During the past year it sent out 3,473 periodicals and received a total of 6,760 books and periodicals.

UNIVERSITY OF TORONTO. The central library receives free copies of the *Transactions of the Royal Canadian Institute* for exchange, and purchases copies of the *University of Toronto Quarterly, Canadian Historical Review, Journal of the Royal Astronomical Society of Canada,* and *Canadian Journal of Mathematics.* These are sent on exchange to about 480 institutions. In addition, various divisions of the University carry on exchanges of their own publications (e.g. Royal Ontario Museum, about 800; David Dunlap Observatory, about 300; Aerospace; Banting and Best Medical Research). The central library sends out lists of duplicates to about 120 libraries, and in 1965-66 disposed of 4,900 volumes in this way.

TRENT UNIVERSITY. The Library uses the *Journal of Canadian Studies* for exchange.

WATERLOO LUTHERAN UNIVERSITY. The Library exchanges *Chiaroscuro* (poetry and short story annual), and duplicate periodicals through the American Theological Library Association.

UNIVERSITY OF WESTERN ONTARIO. The University of Western Ontario *Medical Journal* is exchanged with 57 other institutions. Through membership in the Medical Library Association Exchange, 4,200 issues of journals were sent and 4,482 issues received in the last year recorded.

UNIVERSITY OF WINDSOR. The Library exchanges the *University of Windsor Review* with 20 institutions. In duplicate exchanges, it received 6,693 items and distributed 11,431 items in 1965-66.

YORK UNIVERSITY. The Library exchanges the *Journal of Asian and African Studies* and the *International Journal of Comparative Sociology* with 13 institutions.

Government Publications

Another type of publication which pours into libraries in large quantities, usually without any substantial expenditure of funds, is government documents — the publications of federal, provincial, local, and foreign governments and of international bodies, such as the United Nations. The expense comes, of course, in processing the material for use, providing space, and giving expert reference service — without all of which documents are of little value.

The following table lists the university libraries which are official depositories for federal, provincial, and foreign government publications and for documents issued by international organizations. Some depositories are designated to receive everything distributed by these agencies, and others have selective status, receiving only publications requested. The table shows the percentage of completeness and the date when each library was designated a depository, if known. Further information will be found in the chapter on "Specialized Collections in Canadian Libraries."

Depositories of Government publications in Canadian University Libraries

Library	*Federal*	*Provincial*	*Foreign*	*International*
Acadia	Since 1867			
Alberta	1952 – 100%	Alberta		UN, 1957 – 95%; UNESCO, 1959 – 100%; FAO, 1955 – 100%
Bishop's	1953 – 5%			
Brandon	50%	Manitoba		
British Columbia	1927	British Columbia, 1943	U.S.: all listed in *Monthly Catalog:* G.B.: Parliamentary Publications; Atomic energy publications of 8 nations	UN, 1949; ICAO, 1949; FAO, 1948; UNESCO, 1949; IGMO, 1949; GATT, 1949; OECD, 1955; Council of Europe, 1959
Carleton	Selective, 1950			European Economic Community, 1965
Dalhousie	1953 – 100%			UN, 1947 – 100%; GATT, 1965 – 100%; IBRD; IDA, 1960; IFC, 1956; IMF, 1950; UNESCO, 1965 – 100%; ILO, 1955 – 100%; OECD, 1966 – 100%
Laurentian	1962 – 100%	Ontario		
Laval	100%	100%		UN – 80%; International Travel Bureau – 90%; Council of Europe – 90%; Assemblée de l'Union de l'Europe Occidentale, 90%; ILO, 90%
McGill	100% – early	Quebec, 1920	U.S. – Selective depository, 1966	UN, ILO, UNESCO, FAO, WHO, EEC
McMaster	1923 – 100%		G.B. – Selected, 1920; U.S. Atomic Energy Comm.	
Manitoba				FAO
Montréal	1952 – 100%	Quebec		UN, 1950 – French language; UNESCO, FAO
Mount Allison	1956			
Mount Saint Vincent	1954 – Selective			
New Brunswick	100%	New Brunswick – 100%	G.B. – Selective	UN, 1957 – 100%; UNESCO, 1962 – 100%
Newfoundland	1956 – 100%			FAO, 1965 – Selected
Notre Dame	1964 – Selective			
Ottawa	1957 – 100%	Ontario – Selective		
Queen's	100%			UN

Library	*Federal*	*Provincial*	*Foreign*	*International*
St. Francis Xavier	1960 – 25%	Nova Scotia – 75%		
St. Mary's	Selective Depository			
Saskatchewan	100%	Saskatchewan		
Sherbrooke	1964 – 100%	Quebec – 100%		
Simon Fraser	1965 – English Language			
Sir George Williams	1964 – 95%	Quebec, 1965 – 100%		
Toronto	1954 – 100%		G.B., 1930 – Sessional and Command Papers	UN, 1947 – 100%; UNESCO, 1947 – 100%
Trent	1963 – 60%			
Victoria	1964 – 100%			ILO, OECD, UNESCO – 100%
Western Ontario	1953 – 100%			
Windsor	1954 – 90%			
York	1960 – 90%			

At least one of the selective depositories for Canadian federal publications is receiving as little as five percent of publications available. For the sake of their faculties and students, the selective-status group should re-examine their needs from time to time to make certain that important materials are not being omitted. Asking for too much, rather than too little, is a sound policy.

It would be highly desirable for the Queen's Printers of various provinces to organize the listing and distribution of public documents issued by them according to the pattern followed by the federal government. At present, it is virtually impossible to obtain all the public documents of any of the provinces.

There is some difference of opinion on one matter relating to government documents: how they should be organized for effective use. Perhaps the most common plan is to maintain them as a separate collection, with a specialist in charge. An alternative is to treat them exactly like any other books, journals, pamphlets, maps, etc. coming into the library —classify and catalogue them fully, record them in the general library catalogue and intershelve them with non-documentary publications. The first plan is most economical to administer, but the second also has advantages, especially calling to attention materials that may otherwise be overlooked.

Cataloguing

To this point, the present chapter has been concerned mainly with the first of two major aspects of library technical services: acquisitions of materials. The second phase, complementary to the first, is cataloguing and classification.

Cataloguing is in a state of change, or at least great potential change, at present. Generous appropriations from the federal government are enabling the U.S. Library of Congress to undertake a comprehensive world-wide acquisition programme, aimed at procuring all books of significance published anywhere. Concomitantly, there is being developed an international co-operative cataloguing programme whereby the books originating in each country would be catalogued there, usually by the national library. Printed cards are then issued by the Library of Congress. The British Museum, the Bibliothèque Nationale, the Canadian National Library, and other libraries around the world have agreed to participate in this continuing activity. When fully implemented, the project should result in the availability of printed cards for nearly 100 percent of the books acquired by any library, cutting down tremendously on the cost of cataloguing at the local level. At present, Canadian university libraries reported the following percentages of cataloguing done through Library of Congress services:

Use of LC Cards in Cataloguing

Acadia	90	Notre Dame	85
Alberta	60	Nova Scotia Tech.	91.5
Bishop's	90	Ottawa	70
Brandon	85	Queen's	50
British Columbia	65	St. Dunstan's	100
Brock	79	St. Mary's	90
Calgary	30	Saskatchewan	75
Carleton	65	Saskatchewan (Regina)	99
Dalhousie	70	Sherbrooke	60
Guelph	94	Simon Fraser	80
Lakehead	50	Sir Geo. Williams	80
Laurentian	90	Toronto	40
Laval	75	Trent	38
McGill	1	Victoria	65
McMaster	70–80	Waterloo	70
Manitoba	80	Waterloo Lutheran	75
Mt. St. Vincent	75	Western Ontario	70
Mount Allison	65	Windsor	80
New Brunswick	75	York	85
Newfoundland	88		

As a general rule, the larger the library the smaller the percentage of cards available from the Library of Congress and the larger the percentage of original cataloguing, done locally, is required. Thus, the University of Toronto Libraries are able to procure Library of Congress cataloguing for only 40 percent of the materials being processed there, which means the large expense of original cataloguing for 60 percent of their acquisitions. New institutions, such as Brock, Guelph, Laurentian, Memorial University of Newfoundland, Notre Dame, Simon Fraser, Sir George Williams, and York, are able to obtain a high percentage of cataloguing copy because, for the most part, they are acquiring recently-published books. McGill University, Université de Montréal, and University of Calgary are special cases; the first two have had a policy of doing practically all cataloguing locally (McGill uses only one percent LC cataloguing), and Calgary has adopted a simplified form of cataloguing.

The availability in book form within the next few years of the National Union Catalog in the Library of Congress will also be of great assistance to cataloguers. The catalogue to be produced by Mansell Information-Publishing, Ltd. of London, will cover 16,000,000 entries, representing the holdings of more than 2,000 U.S. and Canadian libraries, in 610 volumes, announced as "the largest single publication undertaken since the invention of printing." Supplements bringing the record down to date will be issued periodically.

Another project of the Library of Congress is to produce machine-readable catalogue cards. The MARC (machine readable cataloguing) project began experimentally in October 1966 with 16 co-operating libraries (including the University of Toronto). Under this plan, the Library of Congress is converting records for selected current catalogue entries into machine-readable form and transmitting them, via magnetic tape reels, on a regular basis to the participating libraries, which are using them for local processing and experimentation and then reporting their experiences. The results of the MARC project will be watched with interest by the library profession.

If the Library of Congress succeeds in its goal of producing catalogue copy for approximately 100 percent of the books acquired by libraries, it may be able to solve a serious problem for a number of Canadian university libraries, namely, the constant dilemma of arrearages — books being acquired faster than they can be catalogued and processed for use. In some instances, collections being held for cataloguing number thousands of volumes. Temporary listing, resorted to occasionally, is an unsatisfactory substitute for complete cataloguing.

The Université Laval Library's list of subject headings in French is a valuable tool for French-language institutions and its usefulness will be increased by further expansion and current maintenance. The peculiar cataloguing problems of the French-language libraries in Canada in other aspects should be given special study.

Classification

Something resembling an epidemic of changes in classification systems has been taking place in Canada and the United States during the past several years and the trend is accelerating. The movement is generally from the Dewey Decimal to the Library of Congress system.

Libraries reporting that they are presently using the LC classification for their collections include Acadia, Alberta, Brandon, British Columbia, Brock, Calgary, Carleton, Dalhousie, Guelph, Lakehead, Laurentian, Laval, McGill (changing from Cutter), McMaster, Manitoba, Moncton, Mount Allison, Newfoundland, Notre Dame, Nova Scotia Tech, Ottawa, Prince of Wales, Queen's, St. Dunstan's, St. Francis Xavier, Saskatchewan, Sherbrooke, Simon Fraser, Sir George Williams, Toronto (plus old local scheme), Trent, Victoria, Waterloo, Waterloo Lutheran, Western Ontario, Windsor, and York. A considerable number of these libraries are in a transition stage from Dewey to LC, and the process of change in some instances will take years.

The only libraries remaining faithful to Dewey, at least for the moment, are Bishop's, Montreal (in part), Mount Saint Vincent, New Brunswick, and St. Mary's.

The wisdom of such precipitate changeovers may be open to question, but since the die has been cast almost nationwide there is little point in reviewing decisions already made. Certainly, if a change is ever to be made, it should occur while the library collections are still relatively small. The larger the library, the more expense and inconvenience are involved in a switch from one classification to another. For the libraries which have not yet made the leap, it should be noted that LC cataloguing can be used without adopting the LC classification; the Library of Congress plans to include Dewey numbers on practically all printed cards in future; changes occur as often in the LC as in the DC classification; the expense of converting from one classification to another is estimated at $1.50 per volume; there are upheavals and disorganization of service during the transition period; more readers are familiar with the DC than the LC classification; the DC notation, sequence, and organization are more readily understood and remembered than the LC's. Furthermore, the importance of classification may be considerably overrated, and its importance will decrease as machine-readable catalogue entries are perfected, book catalogues are produced, and we move closer to the age of automation in libraries.

If a classification system has broken down, as apparently happened in the case of the local scheme used by the University of Toronto, there is full justification, of course, for a change, and for a large university library, such as Toronto, the LC classification is the logical solution. Toronto does not intend, moreover, to undertake complete reclassification. Older collections in the sciences will be stored without change. The social science and humanities sections are being reclassified in part.

Use of Special Classifications

The libraries were asked whether or not they are using the F5000 Canadian modification for Canadian history and the PS8000-9000 classification for Canadian literature. Those replying in the affirmative for one or both were the following:

- Alberta
- Brandon
- British Columbia (history only)
- Brock
- Calgary
- Carleton
- Guelph
- Laurentian
- Laval (literature)
- McGill (planning to adopt)
- McMaster
- Newfoundland (literature)
- Notre Dame
- Ottawa
- St. Francis Xavier
- Simon Fraser (history)
- Sir George Williams
- Toronto
- Trent
- Victoria (literature)
- Waterloo
- Waterloo Lutheran (literature)
- Windsor
- York

A classification tool urgently required by Canadian libraries, it is reported, is an authoritative expansion of the Library of Congress classification schedules for Canadian history and literature. Also needed is a translation of the LC schedules into French.

The Place of Book Catalogues

The economy and efficiency of book catalogues are still a matter for debate. The advent of computer-produced catalogues has opened up various fascinating possibilities. L'Université Laval is planning a separate book catalogue for all pre-1901 publications. Simon Fraser University with 48,000 volumes in its Library on July 1, 1966, is using IBM equipment to bring out a new edition of its catalogue every four months, with monthly supplements and a separate current periodicals list. Time will tell whether this procedure can continue as the rapidly-growing library expands its holdings.

Another book-catalogue undertaking was the Ontario New Universities Library Project, at the University of Toronto, which compiled and printed by computer author-title-subject catalogues for 35,000 titles

(45,000 volumes) in the libraries of five new colleges in Ontario. Since the conclusion of the project, Erindale and Scarborough Colleges have continued the programme in modified form.

It has been suggested that projects patterned after the ONULP scheme should be considered when establishing systems of colleges, such as the projected CEGEP in the Province of Quebec.

Current serials lists, frequently showing retrospective holdings, are becoming commonplace, produced by computer in book form. Such lists for individual libraries, however, are likely to be superseded by the national union lists, from the National Library and National Science Library, from which any participating library can obtain a print-out of its own holdings.

Summary

The task of developing a strong university library collection calls for the best efforts of the faculty and library staff, working together. Subject specialists on the library staff can supplement and complement faculty experts to ensure comprehensive, thorough coverage of fields of interest. Adoption of an acquisition policy statement for each library is recommended to clarify its goals.

In the allocation of book funds, a high proportion, up to 75 percent, should remain in a general fund, unassigned to any particular department.

Standing orders, carefully controlled, can save time and money spent on selection of material and placement of orders, ensure more prompt receipt of new books, may result in better discounts, and perhaps ameliorate the special problems of Canadian libraries in procuring books from abroad.

Some of the devices suggested to Canadian university librarians to build their collections are the establishment of close contacts with a limited number of dealers; persuade governmental authorities to appropriate counterpart funds for the acquisition of materials from certain countries; make well-planned buying trips abroad; check their holdings against standard lists in pertinent fields to avoid serious omissions; set up exchange systems for new and duplicate publications; expand collections of government publications received on deposit.

Book selection guides specifically adapted to the requirements of Canadian libraries should be prepared and published, probably under CACUL-AUCC sponsorship.

In cataloguing, the libraries should be prepared to take full advantage of the international co-operative programme rapidly taking shape to produce catalogue copy for any significant book, wherever published. Also they should be ready to use machine-readable cataloguing, as soon as experiments have shown its feasibility and value. Book catalogues for large collections are still too expensive and of unproven merit to justify a general change to this form of catalogue. Serials lists have demonstrated their value.

Blanket Orders placed by UNIVERSITY OF ALBERTA Libraries

The Library receives automatically all scholarly publications of the following American presses, beginning with 1967 imprints.

A.M.S. (Books)
Abelard-Schuman
Abingdon
Abrams
Academic
Addison-Wesley
Aldine
Allyn & Bacon
Amer Ass'n for Adv. of Science
Amer Ass'n for Health, P.E. & Recreation
Amer Ass'n Dental Schools
Amer Behavioral Scientist
Amer Council on Education
Amer Dental Ass'n
Amer Elsevier
Amer Geographical Society
Amer Geophysical Union
Amer Inst of Biol Sciences
Amer Library Ass'n
Amer Math Society
Amer Ornithologist Union
Amer Soc for Metals
Amer Soc of Photogrammetry
Amer Univ Field Staff
Annual Reviews
Appleton
Archon
Arco
Argonaut
Asia Publ. House
Ass'n of Life Ins. Medical Directors of America
Ass'n of Teachers of Preventive Medicine
Association Press
Atheneum
Atherton
Auerhahn Press
Aurea
Auvergne
AVI
A.S. Barnes

Barnes & Noble
Barre
Basic Books
Beacon
Bedminster
Benjamin
Bethany
Biblio & Tannen
Big Mountain
Bishop Museum
Biophysical Society
Blasidell
Blakiston (McGraw)
Blom
Bobbs Merrill
Bookman
Boston Technical Pub.
Bowker
Braziller
Brookings
Brown, W.C.
Bruce
Burgess

Calif. Botanical Society
Calif Historical Society
Calif, Univ. of Inst. of Govt'l. Studies
Campus Publishers
Carlton
Caxton
Center for Applied Res. in Education
Center for the study of Democratic Instns.
Chandler
Chelsea
Chemical Pub. Co.
Chemical Rubber
U. of Chicago, Dept. of Geography
Child Study Ass'n. of America
Chilton
Citadel
Clarke, Arthur
College Entrance Exam. Board
Colorado Bibliographic Inst.
Columbia Univ. Hispanic Institute
Columbia Univ. School of Int'l. Affairs
Committee for Economic Development
Concordia
Congress. Quarterly Service
Consultants Bureau
Cooper Square
Cornell Univ. Dept. of Asian Studies
Council of State Govts.
Coward McCann
Coyote's Journal Press
Cranbrook Inst. of Science
Crowell, T.Y.
Crown

Da Capo
Davey
Davis, F.A.
John Day
Dekker
Desclée
Devin Adair
Diablo
Dial
Dickinson
Dodd Mead
Dorsey
Doubleday
Dover (Science)
Dow Jones – Irwin, Inc.,
Duell, Sloan & Pearce (Meredith)
Dutton

East West Center
Educational Methods
Eerdmans
Elsevier
Eriksson
Evans, M.

Family Service Ass'n. of America
Farrar
Federation of Amer Soc for Exp Biol
Fleet
Focal
Folklore
Forest
Fortress
Foundation for Res. in Human Behavior
Four Seasons Foundation
Franklin, Burt
Free Press
Freeman
Funk & Wagnall

Gale
Bernard Geis (Random)
Ginn
Gordian
Gordon & Breach
Graylock
Grossman
Grove
Grune & Stratton
Gulf Pub. Co.

Hafner,
Harcourt, Brace
Harlem
Harper & Row
Harvard Business School
Hastings House
Hauser
Hawthorne
Heath
Heineman
Helicon
Herder & Herder
Hill & Wang
History of Science Soc.
Hobbs, Dorman
Hoeber (Harper)
Holden-Day
Holt,
Hoover Instn.
Horizon
Horn & Wallace
Horn Book
Houghton Mifflin
Howell-North
Hunt Botanical Library
Huntington Library
Human Relations Area File (Taplinger)

Industrial Press
Inst. for Comparative Study of Political Systems
Inst. for Social Research
Inst. of Pacific Relations
Int'. Atomic Energy Agency
Int'. Publishers
Int'. Textbook
Int'l. Univ. Press
Interscience
Interstate
(Investors Intelligence)
Irwin

Johnson Publ. (Chicago)
Julian

Kelley
Kenedy
Kennikat
Robert Knapp
Knopf
John Knox

Labor Policy Ass'n.
Lane
Lange
Las Americas
Lea & Febiger
Lippincott
Little, Brown
Liveright (Harlem)
Luce (McKay)

McCutcheon
McGraw
McKay
MacMillan
Marquis
Marzani & Munsell
Med. Exam. Pub. Co.
Merck
Meredith
Merriam
Merrill
Michigan State, Bureau of Bus. & Econ. Res.
Michigan, Univ. of, Dept. of Lib. Sci.
Monthly Review
Morrow
Mosby

Nat'l. Ass'n. of Biology Teachers
Nat'l. Ass'n. of Social Workers
Nat'l. Bureau of Econ. Research
Nat'l. Conf. on Social Welfare
Nat'l. Health Council
New American Library
New Directions
N.Y. Academy of Science
N.Y. Botanical Garden
N.Y. Graphic
N.Y. Public Library
N.Y. State School of Indust. & Labor Rel.
Newman Press
Norton
Noyes

Oak
Obolensky
Oceana
Octagon
October House
Odyssey
Open Court
Open Space Press
Org. for Econ. Coop. & Development
Orion (Grossman)

Pacific Books
Pantheon
Paragon
Peacock
Pergamon
Phaedra (Simon & Schuster)
Phaidon (N.Y. Graphic)
Pharmaceutical Manufacturers Ass'n.
Phoenix Book Shop
Pitman
Plenum (Sons. Bur.)
Potter (Crown)
Praeger
Prentice-Hall
Princeton Univ., Center for Int'l. Studies
Princeton Univ. Library
Public Affairs Press
Priory Press
Putnam

Quadrangle

Rand McNally
Random
Raven
Regnery
Reidel
Reinhold
Rio Grande
Ward Ritchie (Lane)
Rockefeller Inst.
Ronald
Ross & Haines
Rowman & Littlefield
Roy
Russell & Russell
Russell Sage
Rutgers Univ. Center for Alcohol Studies

Sage Books (A. Swallow)
Saunders
Scarecrow
Schenkman
Schocken
School & Society
Science & Behavior
Scott, Foresman
Scribners
Seabury
Sheed & Ward
Shoestring
Shorewood
Sierra Club
Simon & Schuster
Sixties Press
Skira (World)
Sky Publishing Corp.
South-Western
Spartan
Special Libraries Ass'n.
Robert Speller
Stackpole
Stagecoach Press
Stein & Day
Stuart, Lyle
Sunset (Lane)
Superior
Swallow, Alan

Talisman
Taplinger
Territorian, Press of the
Thomas, C. C.
Thompson Pub. Co.
Trident
  (Simon & Schuster)
Tudor (Harlem)
Tuttle
Twayne
20th Century Fund

Ungar
United Church Press
U.S. Naval Institute
Universe
University Books
University Publishers

Vanguard
Van Nostrand
Viking

Wadsworth
Walker
Ives Washburn (McKay)
Washington Square
  (Simon & Schuster)
Watson-Guptill
Watts
Wesleyan Univ., Center
  Advanced studies
Westernlore
Westminster
White
Wild Dog Press
Wildlife Disease Ass'n.
Wiley
Williams & Wilkins
Wilson, H. W.
Wisconsin Academy of
  Sciences, Arts and
  Letters
Wisconsin State
  Historical Society
Wistar Institute
Wittenborn
World

Yale Univ., S.E. Asia
  Studies
Ye Galleon
Yearbook
Yoseloff

UNIVERSITY PRESSES

Alabama
Antioch
Arizona

Boston Univ.
Brandeis
Brown Univ.

California
Catholic Univ.
Chicago
Colby College
Colorado
Columbia
Cornell

Dartmouth
Dayton, U. of
Duke
Duquesne

Fairleigh Dickenson
Florida
Florida State
Fordham

Georgetown
Georgia

Harvard
Hawaii
Hofstra

Illinois
Indiana
Iowa State

Johns Hopkins

Kansas
Kentucky

Long Island
Louisiana State
Loyola

Marquette
Massachusetts
M.I.T.
Mexico (U.N.A.M.)
Miami
Michigan
Michigan State
Minnesota
Missouri

Nebraska
Nevada
New Mexico
New York U.
North Carolina
Northern Michigan
Northwestern
Notre Dame

Ohio (Athens)
Ohio State (Columbus)
Oklahoma
Oregon (Eugene)
Oregon State (Corvallis)

Peabody
Pennsylvania
  (Philadelphia)
Penn State (Univ. Pk)
Pittsburgh
Princeton
Purdue

Rutgers

St. Johns
St. Louis
Seton Hall
South Carolina
Southern Illinois
Southern Methodist
Southwest Texas State
Stanford
Syracuse

Teachers College Press
(Columbia Univ.)
Tennessee
Texas
Texas Western

University Press of Wash.,
  D.C.
Utah

Vanderbilt
Virginia

Washington (Seattle)
Washington State (Pullman)
Wayne State
Wesleyan
Western Reserve
Wisconsin

Yale

ART GALLERIES AND MUSEUMS

Anon Carter Museum of Western Art
U of Arizona Art Gallery (Tucson)
Art Gallery of Toronto
Bowdoin College Museum of Art
Rose Art Museum, Brandeis Univ.
Brooklyn Museum
Brooks Memorial Art Gallery
Buffalo Fine Arts Acad. Albright-Knox Art Gallery
Art Gallery, U. of Calif. Irvine
UCLA Art Galleries Los Angeles
Picture Gallery, U. of Calif., Riverside
Art Gallery, U. of Calif. Santa Barbara
Cleveland Museum of Art (dist Western Reserve)
Colby College Art Museum
Corcoran Gallery of Art
Cordier & Ekstrom, Inc.
Cornell Univ. Andrew Dickson White Mus. of Art
Dallas Museum of Fine Arts
Dayton Art Institute
Isaac Delgado Mus. of Art
Everson Mus. of Art of Syracuse and Ononadga County
Henry Morrison Flagler Museum
Fogg Art Museum, Harvard U.
Solomon R. Guggenheim Museum
Illinois St. Mus. of Nat. History and Art
Sidney Janis Gallery NYC
Jewish Museum NYC
U. of Kentucky, U. Art Gallery
Dept. of Art, U. of Kentucky
M. Knoedler & Co.
La Jolla Museum of Art
Los Angeles County Mus. of Art
Marlborough-Gerson Gallery
U. of Michigan Mus. of Art
Milwaukee Art Center Inc.
Metropolitan Mus. of Art
Munson-Williams-Proctor Inst., Utica N.Y.
Museum of Modern Art, NYC
Museum of Primitive Art NYC
National Gallery of Art, Washington, D.C.
National Gallery of Canada, Ottawa
U. of New Mexico Art Mus., Albuquerque
Upton Gallery, State Univ College of N.Y. Buffalo
N.Y. Gallery of Modern Art including the Huntington Hartford Collection
N.Y. U. Loeb Student Center
Otis Art Inst. Los Angeles
Pasadena Art Museum
U. of Penn, Univ. Museum
Philadelphia Mus. of Art
Portland Art Mus. (Oregon)
Rhode Island School of Design Mus. of Art, Providence
Abby Adlrich Rockefeller Folk Art Collection, Williamsburg
Royal Ontario Mus. U. of Toronto
San Francisco Mus. of Art
Seattle Art Museum
Smithsonian Inst. Freer Gallery of Art
Smithsonian Inst. Nat'l. Coll of Fine Arts
Stanford Mus., Stanford U.
Syracuse U., Lowe Art Cent. School of Art, Syracuse, N.Y.
Univ. Art Mus. of the Univ. of Texas, Austin
Virginia Mus. of Fine Arts Richmond
Walker Art Center, Minneapolis, Minn.
Washington Gallery of Modern Art, Wash. D.C.
U. of Washington, Henry Art Gallery, Seattle
Whitney Museum of American Art, NYC
Winnipeg Art Gallery, Winnipeg, Manitoba
U. of Wisconsin, Dept. of Art History Gallery Milwaukee
Worcester Art Museum Worcester, Mass.
Yale University Art Gallery, New Haven

4. Readers' Services and Use

Readers' services designed to aid faculty members, students, and others in utilizing library resources are the *raison d'être* for a library. Library administration, the technical processes, and all the other activities that go on in a library have the consumer, i.e., the reader, in view. Readers' services assume a variety of forms: reference and research assistance, circulation of library materials, photographic services, interlibrary loans, teaching the use of books and libraries, exhibits, audio-visual services, etc., and may be administered through central libraries, departmental and divisional libraries, office and laboratory collections, by mail, by telephone, telegraph, Telex, or other agencies. A library's public relations improve or deteriorate in proportion to the quality of its services to individual students, scholars, scientists, research workers, and general readers.

Circulation

Statistics on the use of libraries are generally suspect, mainly because they indicate a mere fraction of actual library use. Much consultation of open-shelf collections is unrecorded. A recent research study, sponsored by the Council on Library Resources in the United States, estimates that the non-recorded use of books in libraries may be three to nine times as great as the formal circulation figures, varying according to policies governing stack access and open-shelf collections available to readers. Nevertheless, even though the figures are admittedly incomplete, recorded circulation is sometimes indicative of the extent to which students and faculty are utilizing a library's resources.

According to the standard pattern, there are two types of circulation in college and university libraries: home use, divided between student and faculty loans, and reserve book circulation, all of which may be for varying periods of time. It may be regarded as a healthy sign if home use exceeds reserve use figures; the fact is generally indicative of more independent study and the borrowing of books by students because they want to read them and not because of rigid class requirements.

The following table shows student enrolments, general and reserve circulation figures, and per capita circulation for Canadian colleges and universities, as reported for 1965-66:

Student Enrolments and Circulation Statistics

Institution	*Enrolment (FTE)*	*General Circulation*	*Reserve Book Circulation*	*Per Capita Circulation*
Acadia	1,594	29,695	17,306	21
Alberta	11,078	425,143	53,225	43
Bishop's	848	17,590	11,606	34
Brandon	784	14,104	32,574	59
British Columbia	17,360	797,475	245,883	60
Brock	550	19,007	7,912	49
Calgary	4,127	96,612	59,517	34
Carleton	3,690	138,653	52,145	52
Dalhousie	3,603		Not recorded	
Guelph	3,408	47,192	5,500	15
Lakehead	732		Not recorded	
Laurentian	1,129	20,132	21,746	37
Laval	8,693	126,743	Not recorded	
McGill	12,886	579,597	230,790	63
McMaster	4,667	61,113	62,600	59
Manitoba	9,444	364,746	89,416	48
Moncton	920	18,218	Not recorded	
Montréal	10,466	57,924	2,573	
Mount Allison	1,233	63,000	12,918	62
Mt. St. Vincent	610	16,777	29,027	75
New Brunswick	3,677	121,586	30,106	41
Newfoundland	4,380	50,503	59,759	25
Notre Dame	596	10,727	Not recorded	
Nova Scotia Tech	432	9,448	2,400	27
Ottawa	4,570	85,000	Not recorded	
Prince of Wales	700		Not recorded	
Queen's	5,927	116,945	21,052	23
St. Dunstan's	755	12,637	7,842	27
St. Francis Xavier	1,937	136,813	84,468	114
St. Mary's	1,037	10,545	10,326	20
Saskatchewan	9,058	92,237	134,176	29
Saskatchewan (Regina)	2,679	88,398	30,377	44
Sherbrooke	2,082	20,472	Not recorded	
Simon Fraser	4,196	57,385	51,823	24
Sir George Williams	8,256	147,097	20,057	20
Toronto	19,034	685,670	347,550	54
Trent	526	24,388	11,073	68
Victoria	3,497	145,817	33,847	51
Waterloo	5,755	131,711	8,251	24
Waterloo Lutheran	2,426	82,859	26,503	45
Western Ontario	6,603	226,359	88,505	48
Windsor	2,854	87,328	13,314	35
York	2,740	58,118	18,891	25
Totals	191,539	5,281,660	1,902,474	43 av.

Thus, the range of recorded circulation was from 15 to 114 per student among the libraries which submitted complete statistics. Omitted from the per capita figures are Dalhousie, Lakehead, and Prince of Wales, which were unable to supply any record; Moncton, Notre Dame, Ottawa, and Sherbrooke, which had not recorded reserve book use; and the Université de Montréal, which had statistics only for the central library.

All the libraries except Brandon, Laurentian, McMaster, Mount Saint Vincent, Newfoundland, and Saskatchewan (Saskatoon) showed an excess of general over reserve book circulation — a commendable situation.

There are no generally accepted standards or norms for student per capita use, in part because of the variable factors previously mentioned, and some libraries have ceased to maintain any formal record. The average of 43 reported, however, is generally considered low. A minimum per capita use of 50 is a reasonable figure; 10 libraries were above this average for the year reported.

Reserve Books

Special problems associated with reserve books are a matter of concern to a number of university librarians. The reserve book system grew out of a desire on the part of instructors to escape from the use of a single textbook, either dispensing with a textbook entirely or supplementing the text with a list of parallel readings to be obtained from the library. In the library, the books so listed are placed on reserve, i.e., restricted, and circulated to students on short loans, usually no longer than overnight or for a weekend.

Students, librarians, and many faculty members are in agreement that the reserve book plan is unsatisfactory. The brief periods for which books may be used, the necessity for many duplicates, the waste involved when reading lists are changed, the large number of books not actually used but withdrawn from general circulation, the crowded, noisy, restless condition of the typical reserve book reading room, and the tendency of students not to go beyond books in the reserve collection appear to be basic faults.

Pedagogically superior to either the textbook or reserve book method is a third plan: independent work and study on the part of the student. The third method requires more of both the instructor and the student. On the other hand, the dividends are far greater. To be successful, the independent study concept requires that the student have some training in how to make efficient use of books and libraries. Individual assignments are desirable, with the instructor available for consultation as occasions arise. The student is no longer being spoon-fed. Instead he is treated like an adult and made responsible for using the library's total resources, finding materials relating to his assignments in whatever sources that may be available — books, pamphlets, periodicals, newspapers, government documents, maps, etc. The educational benefits of this process are immense. They are even greater if the student subsequently goes on to graduate or professional study. The independent work plan is probably best adapted to juniors and seniors, but even underclassmen can be profitably introduced to it for simple projects.

Some of the most common abuses of the reserve book system, e.g., placing too many books on reserve, keeping books on reserve when they are infrequently called for, and seldom revising reserve lists can be eliminated by close co-operation between the faculty and library staff members who are in charge of the reserve collection. A related complaint, voiced over and over by students, is the failure to provide enough copies of books in heavy demand. Libraries sometimes have formulas to meet the problem. The University of Victoria, for example, buys one copy for each 20 students for reserve and much-used books. Each case, however, should be evaluated on its merits; a fixed formula may result in acquiring too many or too few copies.

Teaching Library Use

Good instruction in the effective use of books and libraries benefits students at all levels, and even the faculty. The instruction may take various forms: formal courses offered for credit, an orientation period for new students, instruction combined with a subject-field course, such as English or history, a series of non-credit lectures scattered through a term, tours of library departments, audio-visual devices, such as moving pictures, learning tapes, and slides, and published handbooks on the library, its services, and its resources.

The Orientation Programmes Committee of CACUL has in press (published by the Canadian Library Association) a *Summary of Library Orientation Programmes in Eight Canadian University Libraries.*

Undergraduate Library Buildings

A noteworthy development in university library planning is the provision of separate buildings for undergraduate students. In the past, university libraries have been more concerned with the needs of graduate students and faculty members than with undergraduates. A large, complex university library is not properly organized to serve beginning students, and too often they are treated as second-class citizens. The movement toward separate facilities — more simply organized, with collections selected with specific undergraduate needs in mind, and special staffs — began with the Lamont Library at Harvard University in 1948, and similar libraries have been built since at the University of Michigan, Cornell University, California at Los Angeles, University of Texas, University of Minnesota, and Stanford University, and others are under construction or are in the planning stage.

The same advantages are being achieved by separate affiliated college library buildings in a number of Canadian universities, e.g., Toronto. McGill University plans to convert its present main library building into an undergraduate library when the new central library is completed in 1968. When an institution reaches a student enrolment of 10,000, or perhaps as few as 5,000 if there is a large number of graduate students, consideration should be given to a separation of services for undergraduates, to everyone's mutual benefit.

Library Schedules

A matter of frequent agitation among students is demands for longer hours of opening for libraries. Nothing less than 24 hours per day will satisfy some nighthawks, but practical considerations of expense and staff must influence library administrators.

Modern concepts of library architecture encourage a great deal of self-service on the part of library users, and minimum supervision. Well-planned new buildings provide for a single public exit, equipped with turnstiles, through which everyone clears in leaving the library. This plan gives reasonable assurance that all books or other library materials are properly charged before being removed from the building. At the same time, it eliminates the need for maintaining a full staff throughout the library, especially when few readers are present. It is not unusual, therefore, to find new university library buildings open during late night hours with only one or two attendants on duty, one of course stationed at the exit. The Simon Fraser University Library remains open until 2 a.m. with this kind of arrangement.

Evening and Extension Students

In institutions with large numbers of evening students, such as Sir George Williams University, late evening hours are particularly desirable, to avoid having to use the library's resources under too much pressure, in effect providing the same quality of service as for day students. Both circulation and reference services are needed for these students.

Another type of student, requiring another kind of service, is enrolled in extension or off-campus courses. Examples are the extension programmes at the University of Manitoba and the University of Saskatchewan. The University of Manitoba maintains a separate extramural collection for extension courses, the books to be shipped out as needed. The University of Saskatchewan has established a system of extension centres, offering a somewhat limited curriculum, and book collections are provided for use in the centres. The University of New Brunswick also offers extension courses around the province and sends out library books to serve them. The University of Guelph Library reports that it provides extension library service to short course students in the Ontario Agricultural College (horticulture, landscape gardening).

It should be observed that the maintenance of quality in extension courses comparable to that for on-campus offerings presents serious difficulties. The library of the sponsoring institution ought to consider it an obligation to help solve the dilemma by providing the best library services feasible. To avoid conflicts with on-campus needs, separate collections to serve extension students are recommended.

Interlibrary Loans

The most popular and widely-used form of interlibrary co-operation is loans between libraries. The practice has become so general that a carefully devised "interlibrary loan code," defining rules, was adopted several years ago by the Association of College and Research Libraries, and is adhered to by most libraries.

The extent of interlibrary loans among the college and university libraries of Canada may be judged by the following table for 1965-66:

Interlibrary Loan Statistics

Institution	*Borrowed*	*Loaned*
Acadia	319	170
Alberta	4,593	1,957
Bishop's	59	7
Brandon	272	40
British Columbia	2,208	3,123
Brock	80	15
Calgary	2,099	383
Carleton	1,116	1,054
Dalhousie	1,613	871
Guelph	1,758	477
Lakehead	285	15
Laurentian	70	55
Laval	3,670	1,421
McGill	3,037	13,653
McMaster	4,263	1,634
Manitoba	1,706	2,058
Moncton	282	75
Montréal	1,144	2,873
Mount Allison	583	186
Mt. St. Vincent	100 (est.)	100 (est.)

Institution	*Borrowed*	*Loaned*
New Brunswick	2,222	727
Newfoundland	474	156
Notre Dame	15	0
Nova Scotia Tech	290	257
Ottawa	1,508	751
Queen's	3,097	2,018
St. Francis Xavier	326	9
St. Mary's	85	77
Saskatchewan	1,332	1,518
Saskatchewan (Regina)	1,438	29
Sherbrooke	432	35
Simon Fraser	4,892	10
Sir George Williams	189	239
Toronto	5,240	14,824
Trent	328	75
Victoria	462	71
Waterloo	2,962	283
Waterloo Lutheran	340	36
Western Ontario	3,412	2,049
Windsor	1,129	446
York	387	209
Totals	60,933	55,040

Only seven institutions — British Columbia, McGill, Manitoba, Montréal, Saskatchewan, Sir George Williams, and Toronto — loaned more than they borrowed. Two libraries, in particular, McGill and Toronto, bore a heavy share of the load, between them accounting for nearly one-half of all books borrowed. The burden is one for which these libraries deserve to be compensated financially through government grants or from other sources. The National Library, National Science Library, and the Department of Agriculture Library also lend generously.

All the libraries included in the present study were asked to name the principal libraries from which they obtained loans. Most frequently listed among Canadian libraries, in descending order were:

University of Toronto
National Science Library
McGill University
National Library
Queen's University
University of British Columbia
University of Western Ontario
McMaster University
Department of Agriculture Library
University of Alberta
Geological Survey of Canada Library
Université de Montréal

Toronto Public Library
University of Ottawa
Dalhousie University

Some 30 other Canadian libraries, academic, governmental, public, and special, were listed as frequent sources of interlibrary loans. There are also many transactions across the border. The American libraries listed as most often turned to for loans were, again in descending order: Library of Congress, Harvard, Michigan, California, Illinois, Columbia, New York Public Library, University of Washington, and Yale. Fifteen others were listed at least once.

A better distribution of interlibrary loans can be obtained if libraries' holdings are fully recorded in the National Union Catalogue and union lists of serials. If the location of a desired item is unknown, a prospective borrower is likely to go first to the largest libraries, the richness of whose resources is known. Actually, the wanted item may be held by a smaller library closer at hand. This fact points up the desirability of complete listing, at least for all unusual titles, in the National Union Catalogue and in the union lists of serials issued by the National Library and the National Science Library.

On several occasions, too, it was mentioned to members of the study team that many libraries are not receiving standard journals, relying upon interlibrary loans instead. Certainly in fields of primary interest to their faculties and students, university and college libraries should expect to receive the most basic journals, and not have to depend upon their neighbors for loans or photocopies. An alert library acquisitions department will use interlibrary loan records as a buying guide; if an item is called for more than once from another institution, it should probably be acquired locally.

The practice is becoming universal to supply photocopies, especially of journal articles, in lieu of the originals, to meet interlibrary loan requests. Few libraries now lack equipment to make microfilm or Xerox copies. Photocopies have important advantages: they save wear and tear on heavy volumes which may be damaged in transit, avoid possible loss of rare books, provide the borrowing library a copy which it may retain permanently, the expense may be no more and possibly less than round-trip transportation of the original, and the faculty and students at the holding library are not deprived of the use of material while it is off campus.

Telex installations, reported to be available in 35 Canadian libraries, are proving their usefulness in facilitating interlibrary loans, expediting the location of items wanted and of requests for loans.

Another aspect of interlibrary loans is the question of costs. Who should bear the expense of loans? It is a sound principle that if a library does not have a book in its own collection, it is under an obligation to procure a copy, if needed by a faculty member or graduate student for a serious purpose. The costs of interlibrary loans should therefore be borne by the budget of the borrowing library, and budgetary provision made for the expense within reasonable limits. An exception may be made if funds are available in departmental budgets for Xerox copies and for research projects financed by special grants.

Length of Student and Faculty Loans

Traditionally, college and university libraries have limited loan periods for books circulated to students. Reserve books, as discussed earlier, are of course a special case. The most common period for general circulation books is two weeks, usually subject to renewal if not wanted by another reader. In libraries with limited stocks and heavily used, loans may be restricted to one week. Experiments have shown that three weeks is close to an ideal period, giving a student enough time to read a book leisurely, largely eliminating fines for overdue books, and reducing theft and mutilation. Some libraries are experimenting further with no specific limits, simply recalling a book when it is requested by another reader.

A considerably thornier problem is time limitations on faculty loans. Tradition is an even more influential factor here. By long-standing custom, faculty members are a privileged class, being granted more or less indefinite loan periods, and not subject to fines or charges for lost books. As a consequence, grave abuses have developed in many colleges and universities. Faculty members may—and not infrequently do—withdraw library books for years, ignoring the needs of other potential users. The practice is a source of considerable bitterness on the part of students who are thus deprived of access to books they may need to read in connection with course work. A recent study of the matter, based on policies existing in 84 university libraries, has been published.* According to the findings, the concept of indefinite loans still persists, though a majority of the libraries attempt audits at least annually. About one-third of the libraries expect to have the books returned for auditing purposes, but meet with varying success in enforcing the rule.

For the sake of faculties as a whole and the thousands of students being served by university libraries, better regulation of faculty loans is urgently needed. The University of Michigan Library, beginning with the academic

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*Haviland, Morrison C. "Loans to Faculty Members in University Libraries," *College and Research Libraries*, 28 (May 1967), p. 171-74.

year 1966-67, has instituted a limitation of two months on loans to faculty members—a term which would seem reasonable for all normal purposes.

Delivery Services

On large university campuses, with some divisions inevitably remote from the central library and usually with a scattered system of departmental libraries, faculty members and students are often confronted with logistics problems. It is clearly an uneconomic use of a busy faculty member's time to force him to run the length and breadth of the campus to consult or to borrow the books he needs from a variety of libraries.

A highly satisfactory solution to this aggravating problem has been found by the University of Toronto Libraries. There a twice-daily delivery service has been established to departmental libraries and offices—a total of 50 stations. In 1965-66, there were 38,645 volumes delivered to members of the teaching and research staff, and demands on the service are rising 30 percent annually. Though expensive, the Director of Libraries considers the money the most wisely spent of any item in his budget, and the faculty is evidently equally enthusiastic.

Acquisition Lists

As a method of informing faculty members and others in the community of newly-received books, a number of libraries regularly issue lists of new accessions. Typical is the Dalhousie University Library's monthly "New Accessions Catalogued," a list classified by subjects and including serials. The April 1967 number ran to 47 pages, exclusive of separately distributed lists for law and medicine, which added 21 pages. The typing, reproduction, and distribution of such lists are a justifiable expense, if read and consulted by the faculty. A more economical method is to issue selected lists of specialized titles, e.g., new acquisitions in the field of psychology, sent to members of the psychology faculty.

Library Handbooks

Another type of library publication is a handbook containing instructions on how to use the library, describing the library's resources and services, listing departmental libraries, and outlining library rules and regulations. L'Université Laval's *Guide du Lecteur de la Bibliothèque, 1966-67,* is an excellent example. Several libraries publish separate guides for the use of faculty members and graduate students, at a more advanced level. Such manuals are particularly helpful to new students and staff members. An example is Carleton University Library's *Library*

Manual for Faculty Members, which reviews a variety of matters likely to be of concern or interest to the faculty. The AUCC collects multiple copies of handbooks for distribution to libraries.

Photocopying

The business of photocopying of library materials has grown enormously in the past two or three years and is continuing to expand. The availability of Xerox, Docustat, Dennison, Bruning, Thermofax, and other copying equipment has created demands far above expectations. Self-operated machines, usually set for 10 cents per page, have increased the popularity of the service. A study emanating from Queen's University Library in November 1965, entitled "*Photocopying Practices in Canadian University Libraries,*" described the photocopying services of 25 libraries. All except four had established full-fledged photocopying service. Even the smallest colleges in nearly all cases now have Xerox installations.

There are problems associated with photocopying, such as possible copyright violations, but there is every likelihood that the volume of copying will grow far above even its present dimensions, in response to faculty and student demands. Librarians hope that the device will reduce if not entirely eliminate the pernicious practice of mutilation of library materials. Photocopying is also an increasingly useful method of supplementing and extending library resources. In any case, librarians agree that they have a bear by the tail and cannot turn it loose. For self-protection, however, each library needs a well-defined policy statement on the copying of library materials, such as those adopted at Carleton, McGill, Queen's, and other Canadian institutions.

Services to the Community

Though a college or university library's primary obligations are to its own faculty and students, its services and resources should also be available within reason to other qualified users, such as professional men and women, persons in government, business and industry, and serious readers in general, particularly in the community where the institution is located. Examples are cited in the chapter on "Library Co-operation and Interrelationships."

Summary

Every university library should develop strong reference, research, and circulation services for its students and faculty. A minimum per capita circulation of 50 books per year to students demonstrates an actively-used library. Emphasis should be on encouraging home use of books, rather than reserve book reading, and especially (in full co-operation with the faculty) independent study and research. Students should receive such instruction in the use of books and libraries as to make them efficient and effective in carrying through library assignments. Separate undergraduate library buildings are advantageous in large universities. Library schedules of hours open should be as generous as funds and staff available will permit. Special collections to serve extension students are desirable.

Ways and means should be found of compensating such institutions as McGill University and the University of Toronto for the heavy burden of interlibrary loans borne by them. All libraries should contribute records of their holdings to the National Union Catalogue and union lists to help redistribute interlibrary loans.

Regulations bringing faculty loan periods under reasonable control should be adopted in every institution for the greatest good of the greatest number, both among faculty members and students. The major university libraries should give serious consideration to adoption of a campus delivery system, patterned after the University of Toronto plan, to serve all departmental libraries and offices.

Acquisition lists and library handbooks are useful devices for publicizing library resources and services.

Every library should undertake to offer good photocopying facilities, including especially microfilms and Xerox or comparable equipment for full-size reproductions. Each library will need to draft and adopt a policy statement containing the rules which it expects to follow in copying library materials.

Use of an institutional library by non-associated citizens in the community should be permitted and encouraged as long as such use does not impair the service to faculty and students.

5. Physical Facilities

An essential of a strong college or university library programme is proper space and equipment. No matter how excellent the book collection or how efficient the librarians, a poorly-planned, crowded, badly-heated and ventilated library building is a severe handicap to everyone who attempts to use it, to readers and librarians alike.

Library space needs are of three kinds: accommodations for readers, book storage, and work rooms and offices for library staff. There are widely-accepted standards in this area of library administration: seating should be provided for not less than 25 percent of the current student enrolment (some library building consultants recommend as high as 40 percent); allow 25-30 square feet per undergraduate reader, 35 square feet per graduate reader, and 75 square feet per faculty reader; there should be stack or other shelving space equivalent to one square foot per 10 volumes (allowing room for expansion to 15 volumes per square foot); and for staff allow 100 square feet per staff member in general office accommodation, 125 square feet per staff member in processing departments; and 150 square feet per senior staff member in a private office. The major requirements, of course, are for readers and books.*

A building boom of major proportions is in progress among the college and university libraries of Canada — compensation in many cases for years of neglect. Buildings recently completed, under construction, or projected for the immediate future total tens of millions of dollars in value. An institution-by-institution survey of building situations in general should be illuminating.

Age of Library Buildings

By post-World War II standards, most library buildings erected before 1940 are obsolete or obsolescent, unless extensively remodeled, modern lighting and air-conditioning installed, etc. The ages of the main college and university library buildings in Canada are therefore significant.

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*See: "Standards for College Libraries," *College and Research Libraries*, 20 (July 1959), p. 278-79, and CACUL University Library Standards Committee, *Guide to Canadian University Library Standards*, 1965, p. 44-46.

Age of Library Buildings

Institution	*Date of Erection*	*Additions or Remodeled*	*Condition*
Acadia	1964–65		New
Alberta	1963	Addition, 1967–68	Good
Bishop's	1958–59		Excellent
Brandon	1960		Good
British Columbia	1925	1948, 1960, 1964	Unsatisfactory to acceptable
Brock	1965		New
Calgary	1963	Planning	Good
Carleton	1959	1963	Good
Dalhousie	1914	1958	Good
Guelph	1967–68		New
Lakehead	1965–66		New
Laurentian	1964	1967	New
Laval	1964		New
McGill	1893	1900, 1920, 1953	Good
McMaster	1951	1964	Excellent
Manitoba	1953	1963	Good
Moncton	1965		New
Montréal	1929	1939	Good
Mount Allison	1927	1960	Good
Mount St. Vincent	1951	1966	Good
New Brunswick	1966–67		New
Newfoundland	1961		Good
Notre Dame	1959	1960, 1961	Good
Nova Scotia Tech	1961		Good
Ottawa	1956		Fair
Prince of Wales	Library building in planning stage		
Queen's	1924	1965	Excellent
St. Dunstan's	1963		Excellent
St. Francis Xavier	1964–65		New
St. Mary's	1965		New
Saskatchewan	1954–55		Good
Saskatchewan (Regina)	1965		New
Sherbrooke	1964	1972	Excellent
Simon Fraser	1965		New
Sir George Williams	1956	1961	Good
Toronto	1892	1912, 1954	Worn, crowded
Trent	1874	1965	Fair
Victoria	1963–64		Good
Waterloo	1963–65	1973?	Excellent
Waterloo Lutheran	1965		New
Western Ontario	1934	1954, 1962	Good
Windsor	1957–58		Good
York	1965		New

It is astonishing to realize that among these 43 university libraries, only nine have central library buildings predating World War II, and all except one of the nine have been remodeled or have made additions since 1945. Also among the nine, Dalhousie, McGill, Montréal, and Trent have central buildings under construction or projected for the immediate future; Montréal is also building a separate social sciences library, holding 500,000 volumes, and a law library for 300,000 volumes, both to be ready in 1968; the remodeling at Queen's in 1965 was so extensive as to produce an essentially new building. Western Ontario is planning a new building, to be ready in 1969. British Columbia's separate Woodward Library (biomedical) and Undergraduate Library have furnished some relief for the badly crowded central library, but the situation remains critical; planning has begun for a main library building, perhaps to be started in 1968. The University of Toronto's extensive programme will be described later.

Reader Space

Reader accommodations are based on the number of persons who will be using the library building at a given time. In college and university situations, as noted above, the usual practice is to take a percentage of the student body which can be seated in the library, with additional allowances for graduate students and faculty members. There is general agreement that seating should be provided for not less than 25 percent of the students. Recently constructed libraries have provided for 40 percent or more of the current enrolment. The American Library Association's standards set the figure at one-third of the full-time students. The reader capacity will be affected by such factors as enrolment growth, the availability of efficient study space on the campus and in dormitories, the existence of departmental libraries, the number of students who commute to the campus, and the nature of the instructional programme.

Existing seating facilities were reported as follows, students only:

Library Seating Space

Institution	*Student Enrolment 1966–67*	*No. Library Study Spaces*	*Percent of Students Seated in Library*
Acadia	1,594	525	33
Alberta	11,078	1,804	16
Bishop's	848	206	24
Brandon	784	180	23
British Columbia	17,360	3,827	22
Brock	550	125	23
Calgary	4,127	884	21
Carleton	3,690	1,434	40
Dalhousie	3,603	334	9
Guelph	3,408	Not reported	
Lakehead	732	238	33
Laurentian	1,129	258	23
Laval	8,693	1,680	19
McGill	12,886	2,462	19
McMaster	4,667	735	16
Manitoba	9,444	1,144	12
Moncton	920	400	43
Montréal	10,466	1,484	14
Mount Allison	1,233	240	19

Institution	*Student Enrolment 1966–67*	*No. Library Study Spaces*	*Percent of Students Seated in Library*
Mt. St. Vincent	610	160	26
New Brunswick	3,677	1,350	37
Newfoundland	4,380	412	9
Notre Dame	596	84	14
Novia Scotia Tech	432	99	24
Ottawa	4,570	150	3
Queen's	5,927	725	12
St. Dunstan's	755	300	40
St. Francis Xavier	1,937	500	26
St. Mary's	1,037	249	24
Saskatchewan	9,058	700	8
Saskatchewan (Regina)	2,679	207	8
Sherbrooke	2,082	849	41
Simon Fraser	4,196	868	21
Sir George Williams	8,256	898	11
Toronto	19,034	1,374	7
Trent	526	96	18
Victoria	3,497	810	23
Waterloo	5,755	579	10
Waterloo Lutheran	2,426	400	17
Western Ontario	6,603	524	8
Windsor	2,584	540	21
York	2,740	400	15

Without taking into account the special space needs of graduate students and faculty members, the percentage of seating in a great majority of the libraries is distressingly low, even in terms of undergraduate requirements. Only eight institutions — Acadia, Carleton, Lakehead, Moncton, New Brunswick, St. Dunstan's, St. Francis Xavier, and Sherbrooke — exceed the bare minimum of seating space for 25 percent of their student enrolment, and all these universities are in the small or medium-size bracket. The substandard conditions are made more disturbing by the fact that nearly two-thirds of the libraries have erected new buildings within the past decade. This means that in planning the new buildings the projections of future space needs were seriously underestimated or funds were inadequate. In any event, additions are needed immediately.

For a total enrolment of 191,539 students in 1966-67 in the 43 Canadian colleges and universities listed in the above table, the libraries should have provided 47,885 study spaces, according to the 25 percent formula. Actuelly, there were available 30,069 spaces, a shortage of 17,816 seats.

Book Space

For the housing of books in bookstacks and on reading room shelves, tested standards set shelving space initially at 10 volumes per square foot, allowing room for expansion to 15 volumes per square foot — maximum capacity for a growing, actively-used collection. Using linear measurements, a leading consultant, Keyes D. Metcalf, proposes an average of six volumes to the running foot of shelving, or 125 volumes to the section (a section of shelving is seven feet, six inches high and three feet wide, with seven shelves).*

Figures on present volume holdings and square feet of space available for books, as far as reported, together with computations on maximum shelving capacity, based on 15 volumes per square foot, are as follows:

Library Book Space

Institution	*Volumes Held July 1, 1966*	*Square Feet for Books*	*Maximum Capacity*
Acadia	130,225	10,331	154,965
Alberta	518,839	60,600	909,000
Bishop's	43,456	6,490	97,350
Brandon	48,541	3,229	48,435
British Columbia	782,695	84,337	1,265,055
Brock	42,000	4,700	70,500
Carleton	125,526	25,776	386,640
Dalhousie	176,700	21,088	316,320
Lakehead	51,652	7,464	111,960
Laurentian	64,796	8,986	134,790
Laval	525,950	54,343	815,140
McMaster	284,747	20,595	308,925
Manitoba	434,778	33,000	495,000
Mount Allison	135,000	12,547	188,305
Mt. St. Vincent	64,517	3,838	57,570
New Brunswick	166,068	Unavailable	628,000
Newfoundland	137,579	8,068	121,020
Notre Dame	19,795	1,661	24,915
Nova Scotia Tech	32,560	3,075	46,125
Ottawa	250,000	11,850	177,750
Queen's	500,000	50,000	750,000
St. Francis Xavier	96,729	2,300	34,500
St. Mary's	62,992	3,310	49,650
Saskatchewan	326,000	16,000	240,000
Saskatchewan (Regina)	92,297	6,000	90,000
Sherbrooke	150,000	18,500	277,500
Simon Fraser	48,000	4,464	66,960
Sir George Williams	110,000	11,300	169,500
Toronto	2,034,934	77,648	1,164,720
Trent	48,375	4,330	64,950
Victoria	222,453	24,000	360,000
Waterloo	149,058	17,100	180,000
Waterloo Lutheran	79,061	6,090	91,350
Western Ontario	446,426	29,000	435,000
Windsor	240,370	31,028	465,420
York	143,952	19,458	291,870

Nine of the group have exceeded their theoretical capacity — Brandon, Newfoundland, Ottawa, St. Francis Xavier, St. Mary's Saskatchewan at Saskatoon and Regina, Toronto, and Western Ontario. At their

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*Metcalf, Keyes D. "Compact Shelving." *College and Research Libraries*, 23 (1962), p. 104.

present rates of growth, Acadia, British Columbia, McMaster, Manitoba, Simon Fraser, Trent, and Waterloo will also require more space for books within the very near future. At the optimum level of 10 volumes per square foot, instead of the maximum of 15, more of the libraries fall below par.

The above tabulation on holdings is limited to catalogued volumes. It should be remembered that there are other kinds of space needs for library materials. Virtually every library has considerable groups of arrearages or other uncatalogued books, for which room must be found. Equally important are audio-visual materials — films, filmstrips, recordings, and tapes —, microtexts, maps, archives, and manuscripts, all of which have become integral parts of modern libraries. All require space, but are not counted as books, and can hardly be measured in terms of volumes, as are books and periodicals.

Library Staff Space

The third type of library space required is work areas and offices for the library staff. The space presently provided by the various libraries and the number of full-time-equivalent staff members in each were reported as follows:

Library Staff Space

Institution	*No. Staff (FTE)*	*Total Sq. Ft. Staff Space*	*Av. No. Sq. Ft. Per Staff Member*
Acadia	18	2,864	159
Alberta	234	25,600	109
Bishop's	11	1,550	141
Brandon	20.5	1,816	88
British Columbia	289	40,010	138
Brock	41	5,300	129
Carleton	97.5	8,684	81
Lakehead	20	4,048	202
Laurentian	27	4,492	166
Laval	180	24,908	138
McMaster	106	8,993	85
Manitoba	108	7,700	72
Mount Allison	30	2,180	73
Mt. St. Vincent	9.5	1,874	197
Newfoundland	43.5	3,491	80
Notre Dame	12	1,515	126
Nova Scotia Tech	3	425	142
Ottawa	44	6,000	136
Queen's	116	8,977	77
St. Francis Xavier	17	4,580	270
St. Mary's	14	2,554	182
Saskatchewan	100	8,600	86
Saskatchewan (Regina)	38	3,000	79
Sherbrooke	64	7,000	109
Simon Fraser	112	20,199	180
Sir George Williams	94	7,186	76

Institution	*No. Staff (FTE)*	*Total Sq. Ft. Staff Space*	*Av. No. Sq. Ft. Per Staff Member*
Toronto	597	66,123	111
Trent	17	2,460	145
Victoria	87	9,700	114
Waterloo	104	11,600	111
Waterloo Lutheran	23	3,875	169
Western Ontario	179	12,750	71
Windsor	58	7,072	122
York	79	19,458	246

The overall average for the group is 126 square feet per full-time staff member; only 17, or one-half, of the 34 libraries reporting, however, had as much as 125 square feet per staff member, and 11 fell below the minimum of 100 square feet.

Another factor, not recognized in the tabulation for full-time staff members, is student assistants, usually working on an hourly basis. Libraries often place heavy reliance on this type of help, but the space required by such part-time aid is not ordinarily included in the figures for staff size. The first table in the chapter on "Personnel" shows the dimensions. British Columbia, for example, reported using an annual total of 60,600 hours of student assistance, equivalent, on the basis of a 40-hour week, to about 33 full-time staff members.

A further consideration is the amount of space which would be needed if all the libraries met high standards in staffing, as discussed in some detail in the chapter on "Personnel."

Departmental Library Space

As noted in the chapter on "Administrative Organization," a majority of the Canadian universities have one or more departmental or divisional libraries. As a rule, space within these units for readers, books, and staff is included in the summary statistics above for general libraries. Since the separate libraries frequently form an important addition to central library space, a review of their status in individual institutions is included here:

Departmental Library Space

Institution	*No. of Dept. Libraries*	*Total Sq. Ft. of Space*	*No. of Seats for Readers*	*Volume Capacity*
Acadia	3	1,822	37	18,640
Alberta	4	33,664	514	64,300
Bishop's	1	524	8	1,175
British Columbia	30	46,611	1,857	197,008
Dalhousie	6	8,530	200	30,700
Guelph	22	31,360	Not reported	
Laval	7	71,653	1,157	216,844

Institution	*No. of Dept. Libraries*	*Total Sq. Ft. of Space*	*No. of Seats for Readers*	*Volume Capacity*
McMaster	1	7,113	187	18,000
Manitoba	9	33,103	617	84,922
Moncton	1	1,800	25	3,500
Montréal	29	57,368	1,188	224,839
Mount Allison	3	Not reported	62	12,000
Mt. St. Vincent	3		Not reported	
New Brunswick	9	4,669	105	45,367
Ottawa	10	44,125	784	274,950
Queen's	17	46,122	973	245,469
St. Francis Xavier	5	1,900	120	4,413
Saskatchewan	5	6,285	174	46,900
Saskatchewan (Regina)	1	3,900	85	19,500
Sir George Williams	3	17,550	435	20,000
Toronto	44			663,719
Trent	2	Not reported	33	3,000
Western Ontario	11	82,140	1,430	173,382
York	1	25,721	225	51,000

Condition of Present Library Buildings

Under "Age of Library Buildings" above, there were notations on the dates of erection of main library buildings and their general condition. The present section will attempt to analyze certain specific building features bearing on good library service.

Air-conditioning. Even in Canada, air-conditioning has come to be regarded as an essential for libraries and other places where people congregate in any considerable numbers during the summer months. For the good of the books, year-round treatment of the air to maintain proper humidity and even temperature and to keep out impurities is highly desirable. The current status of air-conditioning in the Canadian university libraries is as follows:

ACADIA: Air circulatory system with humidity control.

ALBERTA: Library air-conditioned.

BISHOP'S: Forced draft ventilation; humidity control in basement.

BRANDON: Library air-conditioned.

BRITISH COLUMBIA: Air-conditioning in Main Library "from substandard to adequate;" other libraries "from nil to very good."

BROCK: Library air-conditioned.

CALGARY: Library air-conditioned.

CARLETON: Library air-conditioned.

DALHOUSIE: Portable humidifiers.

LAKEHEAD: Library air-conditioned.

LAVAL: Forced air system.

MCGILL: Air-conditioning in Medical, Botany, and all libraries opened since 1961.

MANITOBA: Library air-conditioned.

MONTRÉAL: Central Library bookstacks are air-conditioned.

MOUNT SAINT VINCENT: Library air-conditioned.

NEW BRUNSWICK: Library air-conditioned.

NEWFOUNDLAND: Forced ventilation.

QUEEN'S: Main Library stacks air-conditioned; main reading room is mechanically ventilated.

ST. DUNSTAN'S: Library air-conditioned.

ST. FRANCIS XAVIER: Library air-conditioned.

SASKATCHEWAN (SASKATOON): Air-conditioning planned for 1967.

SASKATCHEWAN (REGINA): Forced air ventilation.

SHERBROOKE: Air conditioning in central, medical, and science libraries.

SIMON FRASER: Library air-conditioned.

SIR GEORGE WILLIAMS: Library air-conditioned.

TORONTO: Air-conditioning in Laidlaw Library in University College; New College Library; Victoria College Library.

WATERLOO: Air-conditioning in Arts Library Building.

WESTERN ONTARIO: All divisions air-conditioned except Engineering, Music, and University College reading rooms.

WINDSOR: Library air-conditioned.

YORK: Library air-conditioned.

It is thus apparent that air-conditioning in university library buildings is becoming standard practice throughout Canada. The new buildings recently constructed, in progress, or planned, in particular, are practically 100 percent air-conditioned.

Lighting. Equally important in libraries is high-quality lighting. The subject is a complex one. Keyes D. Metcalf in his *Planning Academic and Research Library Buildings* devotes 14 double-column pages to it. He concludes by recommending that "a new library be wired so that 50 foot-candles of light intensity on reading surfaces can be made available anywhere without complete rewiring, that it be provided in a few public rooms and in one-half of the staff work areas, and that in the rest of the building where reading is carried on, including the book stacks from 25 to 30 foot-candles be installed."

The standards proposed by Metcalf are lower than those suggested by some illuminating engineers, but Metcalf stresses that quality is more important than quantity. The prevailing situation in the Canadian university libraries reporting is as follows:

ACADIA: Illumination levels vary from 12 to 70 foot-candles, according to areas.

ALBERTA: 75 foot-candles.
BISHOP'S: 50 foot-candles.
BROCK: 75 foot-candles.
CALGARY: 100 foot-candles.
CARLETON: 50 foot-candles.
LAURENTIAN: 95 foot-candles.
LAVAL: 60 foot-candles.
MCGILL: 31-61 foot-candles.
MCMASTER: 70 foot-candles in new addition; 50 in original structure.
MANITOBA: 45-75 foot-candles.
MONCTON: 45 foot-candles.
MOUNT SAINT VINCENT: 100 foot-candles.
NEW BRUNSWICK: Average 50 foot-candles.
NEWFOUNDLAND: 50-90 foot-candles.
NOVA SCOTIA TECH: 20-30 foot-candles.
QUEEN'S: 30-40 foot-candles; stacks, 15; offices, 50-60.
ST. FRANCIS XAVIER: 55-60 foot-candles.
SHERBROOKE: 70 foot-candles.
SIMON FRASER: 75 foot-candles.
SIR GEORGE WILLIAMS: 50 foot-candles.
TORONTO: 10-70 foot-candles.
VICTORIA: 70 foot-candles.
WATERLOO: 70-80 foot-candles.
WATERLOO LUTHERAN: 70 foot-candles.
WESTERN ONTARIO: Average 50 foot-candles.
WINDSOR: 75 foot-candles in reading rooms, 40-50 in stacks.
YORK: 70 foot-candles.

Location of Building. The question of whether the library building has a central location on the campus or is on the periphery has a direct bearing on the convenience and extent of use of its facilities. Summarizing again, the reports were as follows:

Central locations: Acadia, Alberta, Bishop's, Brandon, British Columbia, Brock, Calgary, Carleton, Dalhousie, Lakehead, Laurentian, Laval, McGill, McMaster, Manitoba, Moncton, Montréal, Mount Saint Vincent, New Brunswick, Notre Dame, Ottawa, Prince of Wales, Queen's, St. Dunstan's, St. Francis Xavier, Saskatchewan (in both Saskatoon and Regina), Sherbrooke, Simon Fraser, Trent, Victoria, Waterloo, Waterloo Lutheran, Western Ontario, York.

Peripheral: Mount Allison, Newfoundland ("was central"), Nova Scotia Tech, St. Mary's, Sir George Williams, Toronto ("was central, has become peripheral"), Windsor.

With a limited number of exceptions, therefore, the libraries meet the important criterion of central location.

New Library Building Programmes

The extensive building activity among the university libraries of Canada has been referred to earlier in this chapter. Several of the current undertakings call for special comment.

The most spectacular project in Canada and probably in any university anywhere is the University of Toronto's research library for the humanities and social sciences, scheduled to begin construction in the near future. There will be three connected buildings on a three-acre site. The total complex is estimated to cost $42,000,000. The main building will be the heart of the University's graduate studies programme and the hub of central services for all libraries in the University. Two connecting wings will house a rare books library and the School of Library Science. The complex will have a stack capacity of 4,627,000 volumes and provide working space for 4,000 professors and students at any given time. There will be 13 levels, divided by functions; 870 carrels will be available for assignment to faculty members and graduate students. There will also be 600 special study spaces for professors and graduate students from other Ontario universities. The implications for library co-operation are discussed in the chapter on "Library Co-operation and Interrelationships."*

Another important building under way is at Université Laval, where the library situation is obviously dynamic. The new library building at Laval will contain about 400,000 square feet of space. The stack area will accommodate 2,100,000 volumes; carrels for graduate students and faculty members number 1,175; a general study area has 450 seats; and there is a generous number of faculty studies, graduate student conference rooms, seminar and smoking rooms. Provisions are also made for a documentation centre, archives and rare books, audio-visual services, and maps.**

An example of planning for a smaller university library may be found at the University of Guelph. The library building there, presently under construction, is scheduled for occupancy in 1968. The total area is 300,000 square feet net, and provision is being made for a book collection in excess of 1,000,000 volumes. For general reader space, 1,250

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*See: *Programme for the Construction of a Building Complex to House the Humanities and Social Sciences Research Library and the School of Library Science.* Toronto: Univ. of Toronto, 1965. 77 p.

***Programme de Construction de la Bibliothèque de l'Université Laval.* Québec: Université Laval, 1966. 77 p.

multi-station and 2,500 single station seats are included. Individual carrels are planned for 50 percent of the expected 1,500 graduate students, and 25 percent of the expected 1,150 faculty members. A striking feature is the flexibility of interior space.*

A new central library building at the University of Western Ontario is scheduled for completion in 1969. The building is designed to serve a student population of 12,000 by 1975, including 1,700-2,000 graduate students, plus 1,000 faculty members. There will be a total of 2,020 seats, divided among 1,227 carrel or individual seats, 608 seats at tables, and 185 seats in conference rooms and lounges. Stack and other shelving space will accommodate 1,198,000 volumes. A separate area for undergraduate students is provided within the main building, with space for 60,000 volumes and 1,000 reading spaces (700 individual and 300 table seats).**

These four examples — at Toronto, Laval, Guelph, and Western Ontario — illustrate the vast expansion under way in Canadian academic libraries, and the modern planning in library architecture which can be observed all across Canada.

Planning for the future is a favorite occupation of librarians, and there is no aspect with which they are more concerned than space requirements — a constantly recurring problem. An excellent example is the University of British Columbia Library's *A Plan for Future Services,* by B. Stuart-Stubbs and W. J. Watson (1966). This document analyzes the future space needs of each faculty in the University; projected enrolments, to 1974-75, of undergraduate and graduate students within each faculty; and detailed figures are presented on a system of general and special libraries designed to meet the varied demands. A total area of 661,577 square feet would be required for the entire programme of top-priority buildings, at an estimated cost of $19,359,370.

A discussion of university library buildings should not overlook mention of two non-academic library buildings destined to have a great impact on Canada's academic libraries: the National Library building, occupied in 1967, and the National Science Library,*** currently under construction, both in Ottawa. Their new facilities will enable the two libraries to undertake greatly enlarged functions — more, and more efficient, services, expanded collections, larger staffs, etc. — and to exercise the role of leadership in the Canadian library world which they should assume.

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*See: *Library—Building Programme and Brief to the Architect.* Guelph: University of Guelph, 1965. 131 p.

**See: *New Main Library, the University of Western Ontario.* London, 1966. 70 p.

***See: *National Science Library Building Programme.* Ottawa: The Library, 1967. 108 p.

Summary

Successful functioning of a modern university or college library requires an adequate physical plant. Rapid strides have been made in Canadian academic libraries in recent years in correcting long-standing deficiencies in this area. Nearly all the university libraries, from coast to coast, have acquired new buildings or major additions, undergone major remodeling, or have new buildings under construction during the past 20 years.

An unfortunate aspect is that a considerable number of new buildings have been under-planned, failing to provide adequate space for growing student bodies and faculties, expanding book collections, and staff work space. Planning for additions, therefore, has had to begin almost as soon as the new buildings were occupied. The employment of expert building consultants may aid in forestalling such difficulties.

With few exceptions, the condition of library buildings was reported as good, indicating high maintenance standards, a majority are air-conditioned, and have excellent lighting. Also, with limited exceptions, the libraries have central locations on their campuses.

The great new research library for the humanities and social sciences being planned for the University of Toronto has highly important implications for the Province of Ontario in particular, and to a considerable extent for all of Canada. Such library buildings as those at Laval, Guelph, Western Ontario, and New Brunswick are also of major significance; they represent the best concepts of modern university library architecture, and incorporate many original features, adapted to, or suitable to, local situations. A continuation of these trends for another decade will give Canada the most up-to-date system of university library buildings of any nation in the world. New buildings for the National Library and the National Science Library are of first-rate significance for academic institutions in terms of expanded services and programmes of national library co-operation.

Finally, it should be noted that there is an expressed need for the establishment of building standards for the guidance of librarians and other planners. Further studies by CACUL should be made of various types of library buildings, college and university, and present standards revised, in co-operation with the AUCC Planning and Building Committee.

6. Personnel

A major criterion in judging the strength of a library is the quality and status of the library staff. Without a competent staff, the library will offer inferior services, falling below its best potentialities. The trend in American and Canadian universities is to consider as academic the staff members who contribute directly to the educational and research activities of the institution. Anyone who views the matter objectively must conclude that the participation of librarians in the educational programme fully justifies their inclusion in the academic category. Librarians are contributing in fundamental fashion, through developing and making available resources for study and research, to the primary purposes for which colleges and universities were founded. The classroom teacher, the research scholar, the librarian, and other members of the academic staff each has a vital part to play in the educational process.

It should also be noted that there is an acute shortage of professional librarians, both in Canada and the United States. Every library is in competition regionally, nationally, and internationally for well-qualified librarians. Those institutions which grant academic status to professional librarians will be in the strongest position to hold able staff members and to recruit others of like caliber.

For the present study, librarians were asked to supply personnel statistics, under several headings, for professional, subprofessional, and clerical staff, and student assistants. The returns for university libraries were as follows, as of September 1, 1966:

Library Personnel Statistics

Institution	*No. Prof. Librns.*	*Unfilled Positions (Prof.)*	*No. Prof. Supporting Staff*	*No. Sub-Prof. Librns.*	*No. Clerical Staff*	*Total Hrs. Student Assistance*
Acadia	6	2	1½	3	5¾	6,180
Alberta	42	17		1	174	37,640
Bishop's	2	2	1	3	3	663
Brandon	4	4			12½	2,500
British Columbia	88	9	1		191	60,600
Brock	11	3	10	2	15	unavailable
Calgary	13	12	15	46	13	9,000
Carleton	15½			9	73	6,227
Dalhousie	19		15	12	35	6,135

Institution	*No. Prof. Librns.*	*Unfilled Positions (Prof.)*	*No. Prof. Supporting Staff*	*No. Sub-Prof. Librns.*	*No. Clerical Staff*	*Total Hrs. Student Assistance*
Guelph	14		1	15	19	unavailable
Lakehead	5		1	4	10	4,000
Laurentian	6			1	20	2,367
Laval	29	5	26	26	94	24,000
McGill	71	4		11	118	18,500
McMaster	24	2		23	57	20,673
Manitoba	22	6		1	79	15,107
Moncton	7	1	2		10	20 hrs./wk.
Montréal	40	9	19	10	40	unavailable
Mount Allison	5	1	4	4	16	unavailable
Mount St. Vincent	4½	1	1		3	60 hrs./wk.
New Brunswick	9	2		1	37	3,500
Newfoundland	8½	2		8	25	1,050
Notre Dame	2		1	3	6	2,134
Nova Scotia Tech	3				3	900
Ottawa	15	1	1	2	25	10,000
Prince of Wales	2½		½			unavailable
Queen's	32	5	¼	30	49	26,000
St. Dunstan's	1			3½	1	unavailable
St. Francis Xavier	5			5	7	1,526
St. Mary's	3	1		5½	4½	1,839
Saskatchewan	21	5½	1		72½	6,000
Saskatchewan (Regina)	12	2		9	15	100 hrs./wk.
Sherbrooke	12	5	9	1	37	2,700
Simon Fraser	23	4	4	13	68	18,618
Sir George Williams	23	4		11	56	26,994
Toronto	172	13½	5½		406	63,227
Trent	5	2			10	4,600
Victoria	26	4	1	20	36	14,000
Waterloo	21	3		5	75	14,444
Waterloo Lutheran	5	1		8	9	2,775
Western Ontario	35	5	5	17	117	11,665
Windsor	17	3		7	31	9,325
York	24	1		12	42	1,592

The range among these 43 universities is, of course, varied, from large, complex institutions to several which are basically colleges.

Personnel Standards

Application of the CACUL University Library Standards Committee's recommended standards shows a failure in some instances to meet minimum criteria. For example, one standard states that professional librarians should compose at least 31 percent of the whole staff. More than one-half of the institutions, 25, have fewer thas 31 percent of their staffs in the professional classification. There may well be extenuating circumstances, if a library is employing professional-supporting technicians and subprofessional librarians to perform routine activities, relieving the professionals to carry on work genuinely professional in nature.

Another standard specified by the CACUL Committee is a minimum ratio of one professional to 300 students. Applying that recommendation to the same group of universities produces these figures, as of the fall of 1966:

Personnel Standards

Institution	*No. of Students (FTE)*	*No. Prof. Librns.*	*Ratio*
Acadia	1,594	6	266
Alberta	11,078	42	264
Bishop's	848	2	424
Brandon	784	4	196
British Columbia	17,360	88	198
Brock	550	11	55
Calgary	4,127	13	317
Carleton	3,690	15½	238
Dalhousie	3,603	19	190
Guelph	3,408	14	243
Lakehead	732	5	146
Laurentian	1,129	6	188
Laval	8,693	29	299
McGill	12,886	71	182
McMaster	4,667	24	194
Manitoba	9,444	22	429
Moncton	920	7	131
Montréal	10,466	40	262
Mount Allison	1,233	5	245
Mount St. Vincent	610	4½	135
New Brunswick	3,677	9	408
Newfoundland	4,380	8½	515
Notre Dame	596	2	298
Nova Scotia Tech	432	3	144
Ottawa	4,570	15	305
Prince of Wales	700	2½	280
Queen's	5,927	32	185
St. Dunstan's	755	1	755
St. Francis Xavier	1,937	5	387
St. Mary's	1,037	3	346
Saskatchewan	9,058	21	431
Saskatchewan (Regina)	2,679	12	223
Sherbrooke	2,082	17	122
Simon Fraser	4,196	23	182
Sir George Williams	8,256	23	359
Toronto	19,034	172	111
Trent	526	5	105
Victoria	3,497	26	134
Waterloo	5,755	21	274
Waterloo Lutheran	2,426	5	485
Western Ontario	6,603	35	189
Windsor	2,854	17	168
York	2,740	24	114
Totals	191,539	908	211 (av.)

The reasonableness and validity of the standard are shown by the fact that it was met by 30 of the 43 libraries, and only six institutions fell below a ratio of one professional to 400 students.

A third CACUL standard relating to personnel specifies that the small libraries (institutions with an enrolment between 1,000 and 1,500) should have not fewer than five professional staff, divided as follows: one chief librarian, two public service librarians, for reference and circulation, and two technical service librarians for processing departments. No minimum is stated for institutions with less than 1,000 enrolment, a category in which 10 of the universities fall. For this group, a standard adopted by the Association of College and Research Libraries (a division of the American Library Association) may be applicable: "three professional librarians constitute the minimum number required for effective service i.e., the chief librarian and the staff members responsible for readers services and technical processes."

Only one institution with an enrolment in excess of 1,000, St. Mary's University, failed to meet the CACUL standard of five or more professional librarians. The ACRL requirement for a minimum of three professionals in institutions with less than 1,000 enrolment was not met by Bishop's, Notre Dame, Prince of Wales, and St. Dunstan's.

Status of Professional Librarians

The importance of proper recognition of professional librarians in academic institutions was stressed above. From a practical point of view, the shortage of librarians is likely to continue into the indefinite future. This situation means that a reasonably competent librarian is offered a multitude of job opportunities. The qualified librarian can be placed in any type of library that interests him, and have his choice of public or technical services. The enterprising and ambitious librarian is highly unlikely to remain where his status is unsatisfactory, salaries mediocre, and other perquisites substandard.

In the case of college and university libraries, the institutions that will be most successful in attracting and holding able staff members are those where librarians are recognized as an integral part of the academic ranks, a vital group in the educational process, with high qualifications for appointment, and all the rights and privileges of other academic employees. On the other hand, if the professional library personnel are in some nondescript category, without clearly defined status, with no institutional understanding of the contributions which they can make to the educational programme, and if they are placed outside of or made ineligible for the usual academic prerogatives, the library will have serious difficulties in recruiting or retaining staff members of more than average ability.

Despite the foregoing considerations, objections are frequently voiced to academic or faculty status for librarians, on the ground that they are academically unqualified. An examination of this criticism is in order. Some fields have tended to emphasize the doctorate more than others. Librarians are in the company of engineers, lawyers, artists, musicians, and certain other groups who belong to university communities, but in the past have customarily followed different patterns of training. The picture is gradually changing in the library profession as more and more graduate schools offer the doctorate in librarianship and as librarians earn doctorates in various subject fields.

Instead of the doctorate, many librarians hold two master's degrees, ordinarily one in library science and the other in a special subject field. The combination may be of more value to a practicing librarian than too narrow specialization, for he then has both technical training in library operation and knowledge of a subject field which may be used in acquisition, cataloguing, classification, reference and research services, or other aspects of library work.

In any case, one must recognize merit in the contention that librarians should establish their place in the academic world by proper preparation. Like the teaching profession, librarianship is becoming increasingly a career for specialists, and its requirements are diverse. The librarians of the future will be expected to possess academic preparation as thorough and as advanced as their colleagues in other fields, Additional criteria normally considered in faculty promotions should also be applied to librarians, such as professional writing and publication, research in library science, participation in the activities of professional associations, bibliographical instruction to students at all levels, and aid to individual faculty research.

Definition of Librarianship

What is meant by an academic professional librarian? The question is basic, for on the answer hinges whatever claim librarians may have for academic or faculty status.

It is generally agreed that library staffs should be composed of at least two categories of workers: (1) professional librarians performing duties of an educational and research nature, requiring professional training for competent performance; and (2) clerical personnel who will be responsible for more elementary, routine, and mechanical tasks. A prime difficulty is that the two categories are frequently confused. At best there is a gray area, particularly in small institutions, where there are borderline tasks which can be as well or better done by the skilled nonprofessional as by the beginning professional. Nonetheless, the characteristics of the two groups are sufficiently dissimilar to permit reasonably clear distinctions to be made.

Considerable support exists among university library administrators for three divisions of personnel, instead of two; that is, professional, subprofessional, and clerical groupings. The rationale is that in large libraries many subprofessionals, who would not require graduate library school preparation, can be employed and trained to achieve satisfactory skill in the performance of certain technical phases of library work. This concept is widely prevalent in Canadian university libraries, as an examination of the statistical table above, for numbers of staff members, will reveal. Twenty-two institutions are employing a total of 117 "professional supporting staff" members as systems analysts, subject and language specialists, business managers, and in other supporting roles; and 33 libraries list 331 subprofessional librarians on their staffs. While the total for these two groups is considerably less than for the clerical category, which is found in all the universities except one, the principle is clearly recognized.

In reviewing the criteria for professional appointments developed by major university libraries, certain common elements begin to emerge. It will be found, for example, that a professional position is one in which mature judgement is required, or in which the incumbent is assigned certain types of administrative authority or responsibility, or is expected to initiate and develop policy, or is required to possess a thorough acquaintance with the bibliographic apparatus of research libraries, or needs a highly specialized subject or linguistic background, or may be called upon to plan new programmes in library technology. Such criteria differentiate the professional librarian from the subprofessional or nonprofessional worker in libraries.

In further support of their claim for academic status, professional librarians unquestionably do much teaching, formally and informally. But even if librarians never enter a classroom, their right to be called teachers is entirely legitimate. Able reference librarians, for example, require thorough knowledge of the contents of a great variety of books, journals, pamphlets, and unpublished data to carry on their work. Among our acquisition librarians and subjects cataloguers are linguists and experts in special fields. Their erudition would stand comparison with most university teaching faculties.

Looking ahead, it appears likely that the proportion of professional to clerical or technical staff may be reduced. As centralized cataloguing programmes achieve an increasing degree of completeness, the need for large cataloguing staffs in individual libraries will be eliminated, and, except for supervisory personnel, the maintenance of catalogues will become largely a clerical operation. Also, as libraries become more automated and mechanized, it may be feasible to reduce both professional and clerical personnel—or at least the nature of their work will change.

Place of Canadian University Librarians

In the light of the foregoing considerations, a closer look at the place of Canadian college and university librarians in the academic world is in order. The librarians were asked specifically about their status: academic, faculty, professional, or other classification, and their eligibility for sabbaticals, study leaves, research grants, faculty club, membership on faculty committees, retirement benefits, etc. The responses, institution by institution, were as follows:

ACADIA UNIVERSITY. Only the chief librarian has faculty status (associate professor), is eligible to belong to the faculty club, and serves on faculty committees. All full-time staff members receive retirement benefits.

UNIVERSITY OF ALBERTA. The professional librarians are grouped with the academic staff, though not accorded equal ranks and salary levels. Most fringe benefits, except sabbaticals, but including study leaves, research grants, faculty club membership, retirement, group insurance, and conference travel funds are received by the librarians.

BISHOP'S UNIVERSITY. The chief librarian has faculty status; other librarians are in a professional classification. All may join the faculty club and are eligible to participate in the University's pension plan.

BRANDON COLLEGE. Professional librarians have academic status and are eligible for the usual faculty perquisites.

UNIVERSITY OF BRITISH COLUMBIA. The professional staff has academic status and has the same perquisites as the faculty.

BROCK UNIVERSITY. The librarians have "social faculty status." No policy has yet been established concerning faculty perquisites.

UNIVERSITY OF CALGARY. The librarians have academic standing and their perquisites are the same as for the teaching staff.

CARLETON UNIVERSITY. Librarians have faculty status socially and in academic processions, but are regarded as a professional group, eligible for study leaves, faculty club, and retirement benefits. The chief librarian serves on faculty committees.

DALHOUSIE UNIVERSITY. Professional librarians are defined as faculty and are eligible for sabbatical leaves.

UNIVERSITY OF GUELPH. Librarians are classified with the faculty.

LAKEHEAD UNIVERSITY. Librarians are considered academic and perquisites are the same as for the faculty, with the possible exception of study leaves, not yet tested.

LAURENTIAN UNIVERSITY. Librarians have academic status, and are eligible for all faculty privileges except perhaps sabbaticals.

UNIVERSITÉ LAVAL. Librarians are academic and possess the usual perquisites except perhaps sabbaticals.

MCGILL UNIVERSITY. The director and associates are academic and faculty; senior members of the staff have a professional classification; and others are considered administrative staff. Librarians receive all standard faculty perquisites except sabbatical leaves.

MCMASTER UNIVERSITY. Three librarians are rated as faculty, and 24 are in a professional classification. The academic group belong to the faculty club and serve on faculty committees. Librarians are allowed study leave on half salary. Faculty status for librarians is being requested.

UNIVERSITY OF MANITOBA. Three staff members are academic and 19 are professional. The first group is entitled to all faculty privileges, and the second to study leaves, research grants, faculty club, and retirement benefits.

UNIVERSITÉ DE MONCTON. Librarians are classed as faculty members.

UNIVERSITÉ DE MONTRÉAL. Three librarians are rated academic, the remainder professional. All are eligible for retirement benefits.

MOUNT ALLISON UNIVERSITY. The chief librarian only is ranked with the faculty. For other professional librarians, minimum salaries are geared to the lecturer base. Librarians serve on faculty committees, and are eligible for retirement benefits and study leaves.

MOUNT ST. VINCENT UNIVERSITY. Librarians rank as academic and professional; they are eligible to serve on faculty committees and for sabbaticals.

UNIVERSITY OF NEW BRUNSWICK. Librarians have faculty status. The Faculty Manual states that librarians as "members of the academic staff of the University . . . come under the policies and regulations pertaining to faculty members."

MEMORIAL UNIVERSITY OF NEWFOUNDLAND. Librarians are defined as academic and professional, eligible for all the usual faculty perquisites.

NOTRE DAME UNIVERSITY. Librarians receive "all faculty benefits," but their exact status is not defined.

NOVA SCOTIA TECHNICAL COLLEGE. The librarian is ranked as faculty; the status of other professional librarians is being reviewed.

UNIVERSITY OF OTTAWA. The professional librarians, it is reported, are classified as "glorified technicians." They may serve on university committees and their retirement benefits are the same as for the faculty.

PRINCE OF WALES COLLEGE. The librarian is a faculty member (associate professor), with the same prerogatives.

QUEEN'S UNIVERSITY. As of September 1966, professional librarians were defined as belonging to the academic staff. They may join the faculty club and are entitled to the usual retirement benefits.

ST. FRANCIS XAVIER UNIVERSITY. Three librarians are rated academic and the remainder professional.

UNIVERSITY OF SASKATCHEWAN (Saskatoon). The chief librarian only ranks as a faculty member. The other librarians are considered a professional group apart. Nevertheless, professional librarians are eligible for membership in the Faculty Association and Canadian Association of University Teachers, and most have joined. Librarians are entitled to study leaves, faculty club membership, and retirement benefits.

UNIVERSITY OF SASKATCHEWAN (Regina). The situation is substantially the same as on the Saskatoon campus; the librarian and assistant librarian at Regina have academic status.

UNIVERSITÉ DE SHERBROOKE. The staff has a professional classification; it is eligible for sabbaticals, study leaves, university club membership, can serve on university committees, and has other rights normally accorded professors.

SIR GEORGE WILLIAMS UNIVERSITY. Librarians have academic status, without rank; their salary scale is parallel to, but not identical with the faculty scale. They are eligible for faculty club membership, membership on faculty membership, and retirement benefits.

UNIVERSITY OF TORONTO. Librarians have administrative status; they serve on faculty councils and committees; have the same retirement, group insurance, and medical plan as the faculty; are granted occasional sabbaticals for special purposes; receive study leaves; are eligible for University research grants; and at the upper levels may join the faculty club.

TRENT UNIVERSITY. The status of librarians is "indefinite." They receive retirement benefits, but other perquisites are "under consideration."

UNIVERSITY OF VICTORIA. Librarians are classed as professionals. Their eligibility for various perquisites "is currently under negotiation."

UNIVERSITY OF WATERLOO. Librarians have a combination of academic and professional rating. Present privileges include study leaves, faculty club membership, and retirement benefits.

WATERLOO LUTHERAN UNIVERSITY. Librarians are in a professional classification.

UNIVERSITY OF WESTERN ONTARIO. The senior librarians, divisional and professional heads have faculty status. Retirement benefits are uniform in the University, and study leaves are granted from the library budget.

UNIVERSITY OF WINDSOR. The University's organization chart lists the Library under "Academic Services," but librarians have a professional classification. Librarians are eligible for the usual faculty perquisites.

YORK UNIVERSITY. The three principal librarians are rated as academic; all others are in a professional classification.

As one reviews the policies of these 40 universities, it is evident that a variety of practices has grown up. Too often, university administrators have been puzzled about where librarians belong in the academic hierarchy. One consequence is a series of compromises. In several instances, no decision has been made, thereby leaving the librarians suspended in limbo without any status — academic, professional, administrative, or otherwise. Nevertheless, solutions are being actively sought in a number of institutions which until now have not satisfactorily resolved the problem. The trend is clearly in the direction of full recognition of professional librarians as integral members of the academic staff, and this direction most likely represents the wave of the future.

It is suggested that the co-operation of the Canadian Association of University Teachers be enlisted toward improving the status of professional librarians in universities. This influential organization could play a key role in obtaining proper recognition of librarians, if convinced of the validity of their claims.

Salaries

Several factors are affecting current salary trends for librarians, among them economic inflation, the scarcity of qualified personnel, the low output of library schools, and international competition. These factors have resulted in a steady upward movement of library salaries, beginning with World War II.

The basic importance of this matter stems from two considerations. First, library salaries must remain competitive with those in other professions, if the best candidates are to be attracted to librarianship as a permanent career; and, second, salaries are nearly always the largest single item in the budgets of college and university libraries. Since 1951, the salaries of beginning librarians have risen more than 100 percent. One leading American library school reported, for example, that its 1951 graduates were placed in positions at average salaries of $3,284. The average for June 1967 graduates is expected to be $7,000.

A compilation of college and university library salary figures for Canada was issued in a preliminary release by the Dominion Bureau of Statistics in January 1967, covering the academic year 1965-66. Following is a summary table of the findings:

Salaries of Full-Time Staff in Professional Positions,
University and College Libraries, 1965–1966

Salary range	*Chief librn. or dir.*	*Deputy, assoc. or asst. librns.*	*Dept. or div. heads*	*Heads of affiliated libraries*	*All other professional librns.*
	number of persons				
$15,000 and over	6	–	–	–	–
14,000 – 14,999	2	–	–	–	–
13,000 – 13,999	4	–	–	–	–
12,000 – 12,999	8	2	–	–	–
11,000 – 11,999	2	6	–	1	–
10,000 – 10,999	8	8	6	2	–
9,000 – 9,999	10	5	14	3	–
8,000 – 8,999	6	5	40	1	5
7,000 – 7,999	5	2	47	8	48
6,000 – 6,999	5	3	33	9	201
5,000 – 5,999	3	–	11	10	212
Under $5,000	2	–	2	–	1
Total	61	31	153	34	467
Median salary	$9,950	10,063	7,649	6,778	6,102
Median starting salary of professional librarians with no experience $5,500					

As could have been anticipated, there was a heavy concentration of salaries at the lower levels. Of the total of 746 individual salaries recorded, only 55 were above $10,000, and 492 — well over two-thirds — fell below $7,000. Comparable statistics for the same year were recently published by the American Library Association for 1,891 U.S. college and university libraries,* but summaries have not been prepared. A quick review of the A.L.A. tables, however, indicates that the general level of Canadian salaries was substantially lower than their American counterparts. If this fact continued to be true, the Canadian libraries would be handicapped in staff development and maintenance, because of greener pastures on the other side of the border. There are evidences, however, that during the past year the gap has been narrowed, both in the top bracket and in beginning salaries. In any case, it must be realized that salaries must be competitive if new staff members are to be found and old ones replaced, in the face of a chronic shortage of librarians.

**Library Statistics of Colleges and Universities, 1965-66; Institutional Data* American Library Association, 1967. 234p.

There should be recognition of the fact that librarians are ordinarily on 11-month appointments, rather than for the academic year only, as is the case with most teaching members of the faculty. Consequently, a two-ninths supplement should be added to the base salaries of librarians on year-round appointments, corresponding to summer session teaching appointments.

A limited study undertaken by the chief librarian of the University of Saskatchewan (Saskatoon) produced data on the salaries of chief and assistant librarians in 17 Canadian universities as of October 1, 1966. The figures are as follows:

Chief Librarians:	
Mean	$14,767
Median	15,183
Top	18,650
Assistant Librarians:	
Mean	$11,430
Median	11,500
Top	13,460

The most recent figures were furnished by Dean W. Halliwell, Librarian, University of Victoria, shortly before the present study went to press. The statistics compiled by Mr. Halliwell cover professional salary scales in effect in 1967-68 for 28 university libraries and average and median professional salaries in the same institutions for the same year. The two tables are as follows:

Professional Salary Scales in Effect, 1967/68
(Figures in parentheses indicate more than one scale in the category)

	General and Senior Librarians	*Department & Division Heads*	*Assistant and Associate Libns.*	*Chief Librarian*
Western Provinces				
Alberta	6,800–10,450(2)	10,500–12,450	12,500–16,500(2)	16,600–
British Columbia	6,500–	9,000–	no scale	no scale
Calgary	6,800–8,900(2)	9,000–13,500(2)	14,000–16,550	no scale
Manitoba	6,500–	no scales		
Sask. (Regina)	6,500–9,600	9,000–11,300	no scale	no scale
Sask. (Saskatoon)	6,500–9,600(3)	9,000–11,300(2)	no scale	no scale
Simon Fraser	6,500–	9,000–	12,000–13,500	no scale
Victoria	6,500–	9,000–	–	no scale
Central Provinces				
Brock	6,600–8,350(2)	7,900–10,500(2)	–	no scale
Carleton	6,400– (2)	8,100– (2)	–	no scale
Guelph	6,600– (2)	8,500– (2)	11,000–	16,000–

	General and Senior Librarians	*Department & Division Heads*	*Assistant and Associate Libns.*	*Chief Librarian*
Lakehead	7,500–9,000	9,300–11,300	11,800–	15,300–
Laurentian	6,500–7,500	7,500–9,500		no scale
Laval	5,430–8,765(3)	8,985–13,465	12,150–15,435(2)	no scale
McGill	5,800–7,600(2)	7,400–10,000(2)	10,500–	no scale
McMaster	6,500–9,000(2)	8,500–11,000	11,000–15,000(2)	15,000–
Montréal	6,006–8,359(3)	7,176–9,456(2)	10,000(?)–17,850(3)	15,000–
Ottawa	6,500–9,225(2)	9,500–12,350	–	13,900–18,765
Queen's	6,300– (3)	9,000–	13,000–	no scale
Sherbrooke	6,000–10,500(2)	7,325–12,500(2)	9,475–1[illegible],500	10,600–15,700
Sir George Williams	6,700–9,700(2)	9,000(2)	no scale	no scale
Toronto	6,800– (2)	8,300– (2)	no scale	no scale
Trent	6,600–9,000(2)	8,000–11,000(2)	–	no scale
Waterloo	6,600–11,100(3)	8,275–13,460(2)	–	14,741–
Waterloo Lutheran	6,400–8,200	7,200–9,900(2)	–	13,000–
Western Ontario	6,500–8,000(2)	8,000(2)	16,000	no scale
Windsor	6,600–10,000(2)	8,500–13,500(2)	10,800–	14,500–
York	6,400– (3)	8,850–12,000	no scale	no scale
Atlantic Provinces				
Acadia	5,200–6,000	6,200–7,000	–	no scale
Dalhousie	6,000–8,500	6,000–12,000(3)	12,000–16,000	14,500–
Memorial	6,200–7,800(2)	7,600–9,000	8,900–10,000	no scale
Moncton	6,000–7,400	7,400–8,900	8,500–10,000	10,800–
New Brunswick	6,200–8,200(2)	8,200–10,200(2)	–	no scale

Average and Median Professional Salaries, 1967/68

	Excluding Chief Librarian		*Including Chief Librarian*	
	Average	*Median*	*Average*	*Median*
Western Provinces				
Alberta	9,193	8,400	9,370	8,400
British Columbia	8,495	7,800	8,602	8,000
Calgary	9,330	10,550	9,865	11,775
Manitoba	8,105	7,800	8,627	7,500(?)
Sask. (Regina)	8,090	8,200	8,520	8,400
Sask. (Saskatoon)	8,240	7,400	8,485	7,400
Simon Fraser	8,304	7,400	8,676	7,400
Victoria	8,404	8,000	8,748	8,100
Central Provinces				
Brock	7,287	6,950	7,696	7,150
Carleton	7,357	6,800	7,677	6,900
Guelph	8,233	–	8,812	–
Lakehead	9,366	9,700	10,414	9,700
Laurentian	7,393	7,500	7,969	8,500
Laval	8,031	–	8,169	–
McGill	7,139	7,600	7,281	7,800
Montréal	7,659	7,345	7,768	7,345
Ottawa	–	8,008	–	7,579
Queen's	7,598	9,950	7,869	12,700(?)
Sherbrooke	8,800	9,600	9,285	9,625

	Excluding Chief Librarian		*Including Chief Librarian*	
	Average	*Median*	*Average*	*Median*
Sir George Williams	8,580	8,000	8,565	8,000
Toronto	8,095	7,600	8,185	7,600
Trent	8,127	8,000	8,751	8,200
Waterloo	8,074	7,500	8,480	7,650
Waterloo Lutheran	7,400	7,550	8,333	7,800
Windsor	8,321	8,200	8,730	8,400
York	8,156	8,200	–	–
Atlantic Provinces				
Acadia	6,180	6,200	7,200	6,500
Dalhousie	7,850	7,000	8,081	7,100
Memorial	7,250	6,800	7,808	7,000
Moncton	7,000	6,300	7,570	7,000
New Brunswick	7,478	7,200	8,478	7,350

Education of Librarians

Canada has five professional library schools offering library science degrees:

Graduate School of Library Science, McGill University
School of Library Science, University of Toronto
School of Librarianship, University of British Columbia
Ecole de Bibliothécaires, University of Ottawa
Ecole de Bibliothéconomie, Université de Montréal.

The official accrediting agency for library schools is the American Library Association, which inspects and approves schools meeting certain standards, both in Canada and the United States. The first three schools listed above requested and received accreditation: McGill in 1929, Toronto in 1937, and British Columbia in 1961. This is also the order of their founding: McGill in 1927, Toronto in 1928, and British Columbia in 1961. The schools at the Université de Montréal and University of Ottawa have not yet been accredited, though they are working toward that goal.

The ALA accreditation standards specify qualitative criteria for organization and administration, financial support, faculty, administrative and non-instructional staff, curriculum, admission requirements, degrees, quarters and equipment, and library services and facilities.* There are important advantages for a library school and its graduates to be on the approved list, and Montréal and Ottawa should achieve full accreditation as promptly as possible.

From 1931 to 1965, the McGill library school offered the fifth-year B.L.S. degree. In 1965 that degree programme was discontinued and a two-year curriculum, requiring college graduation for admission and leading to the M.L.S. degree, was instituted. There were only 20 graduates in 1966, but 44 are anticipated for 1967. Students are prepared for all the major branches of librarianship: university, college, public, school, and special libraries.

**ALA Bulletin*, 46 (February 1952), 48-49.

The University of Toronto School of Library Science offers two degrees: the B.L.S., a basic one-year programme requiring college graduation for admission; and the M.L.S. for a year of graduate study beyond the B.L.S. degree. Graduates are prepared for and placed in all types of libraries. Physically, the School will be well provided for in the huge library building programme projected for the University of Toronto, with space capable of accommodating a maximum enrolment of 400 full-time students. Space is currently available for only 200 students.

The University of British Columbia School of Librarianship has rapidly achieved a reputation for producing outstanding graduates since its establishment in 1961. The standards are high. It has a selective admission policy, admitting only full-time students to a maximum of 80. The student-faculty ratio is ten to one. A one-year graduate programme leading to the B.L.S. degree is offered.

The Université de Montréal Ecole de Bibliothéconomie, which had its beginnings in 1937, is in a transition period. The degree of B. Bibl. (Baccalauréat en Bibliothéconomie) is presently conferred on two categories of students: those who enter with a B.A. from the Université de Montréal or equivalent and who complete a minimum of 60 credits, one-half in library science; and students with a master's degree or an honors B.A. from the Université de Montréal or equivalent and who complete a minimum of 30 credits in library science. The two-year programme will be phased out as of September 1968. There were 55 students enrolled in September 1966. Graduates are trained for and placed in all types of libraries.

Two degrees are offered by the University of Ottawa Library School: a B.L.S., requiring a bachelor's degree for admission; and a M.L.S. degree, for which a bachelor of library science degree is a prerequisite. The School was founded in 1938. The curriculum is broad, covering all types of libraries. A majority of graduates are placed in government libraries and in French-speaking institutions of Canada.

New Library Schools

Plans are projected for the establishment of three new library schools within the next year or two, at the University of Alberta, University of Western Ontario, and Dalhousie University, all of which will begin with high standards and with the intention of seeking ALA accreditation as promptly as possible. The first two institutions have already appointed outstanding library educators to plan and to direct their programmes: Sarah Rebecca Reed at the University of Alberta and Andrew D. Osborn at the University of Western Ontario.

A Needed Library Schools Committee was appointed by the Canadian Library Association in 1966. The committee's preliminary findings, recently released, concluded that "there is a definite need for training more librarians." An inquiry was addressed to the larger public libraries, university and college libraries, provincial libraries, special and school libraries, concerning their present and future needs. The total of 194 libraries estimated that they would require 5,236 librarians in the next 10 years for new positions or as replacements.

Future Aspects of Library Education

In its survey of library education issued in 1966, the Dominion Bureau of Statistics noted 600 existing vacancies for professional librarians, but if libraries came up to recommended standards, a total of 18,850 additional personnel would be needed. For the last year reported by the Bureau, 1965, the five library schools produced 205 graduates with bachelor's degrees and 15 with advanced degrees—numbers quite inadequate to meet the demands of Canada's expanding university and other libraries.

Financial aid is an important inducement for students interested in librarianship as a career. The Dominion Bureau of Statistics summary found that 90 students were receiving scholarships or similar grants in the five schools for the last year reported. All told, 26.2 percent of the graduates received some form of financial aid. The aid programme will need to be expanded to attract top-notch students in competition with other professions. It may well be that areas now without library schools, e.g., Manitoba and Saskatchewan, would find it more advantageous to subsidize students from their regions to attend established library schools than to begin schools of their own. The University of Calgary employs 20 graduate students on an intern basis; four of these are then selected to enter the University of British Columbia library school, with their expenses paid while completing their professional training.

There is considerable confusion about the future direction of library education in Canada. Some 20 years ago, American library schools discontinued the fifth-year bachelor's degree and the sixth-year master's degree in library science, and elected instead to offer a master's degree at the end of the fifth-year's study. The Canadian schools, however, have continued to follow the old pattern, i.e., a fifth-year bachelor's and/or a sixth-year master's degree, possibly because their university administrations were unwilling to approve a fifth-year master's degree not based on an undergraduate major. Now, it appears that the new school at the University of Western Ontario will confer a master's degree on college graduates who complete 41 weeks of study in the regular academic year or three summer sessions. Such a step will doubtless force the other Canadian schools to re-examine their degree structure. Many will maintain that one year's training is adequate for general library positions, and two bachelor's degrees are illogical. A fifth-year master's degree would be an encouragement in recruiting good students, who are unwilling to spend two years for a master's degree, when excellent positions are available in other fields requiring shorter periods of training. There would be an advantage also in a certain amount of conformity with the degree structure of American library schools. At least one school, perhaps the University of Toronto, should offer a doctoral programme in library science, as some 10 American library schools are now doing.

Several library administrators pointed out the need for specialization in library schools to accommodate the increasing demand for specialists in university and other research libraries. Possible examples are combination programmes with other departments to produce subject experts, linguists, and systems analysts.

Other Training Agencies

In addition to the graduate library schools, operating or projected, a number of Canadian universities are offering undergraduate curricula in library science, usually to prepare individuals for subprofessional positions in various types of libraries or to prepare librarians for small public and school libraries not requiring advanced training. Examples of such programmes are the following:

LAKEHEAD UNIVERSITY, which has a School of Library Technology, a two-year course designed to train library technologists.

UNIVERSITY OF MANITOBA has three credit courses in the Faculty of Education as options for candidates for the Bachelor of Education degree.

UNIVERSITY OF NEW BRUNSWICK has a two-part course, covering cataloguing and classification and administration, designed for teachers attending summer school; there is degree credit.

UNIVERSITY OF CALGARY has two undergraduate courses in the Faculty of Education for school librarians.

UNIVERSITY OF ALBERTA. A similar programme is offered in Alberta's Faculty of Education.

UNIVERSITY OF SASKATCHEWAN (Saskatoon) has summer courses for teacher librarians, strictly oriented to school library work. The Regina campus has three courses in the area: materials for the elementary school library, school library services, and materials for the secondary school library.

ACADIA UNIVERSITY has a general library science course designed for those who plan to work in school libraries or as junior assistants in public or university libraries.

The University of Saskatchewan at Saskatoon has under consideration the establishment of a four-year school for the training of sub-professional librarians, similar to the programme at Lakehead University.

If a clear distinction can be made and maintained between training for technicians and graduate education for professional librarians, the end result will be the upgrading of the profession. The library technicians will carry on the routines necessary for the day-to-day operations of libraries, while the professionals will be released for supervisory tasks, to plan the development of the library's resources for study and research, to plan improvements in the library's services for students and faculty, to identify problems and find solutions. Undoubtedly, the professional librarian of the future will be expected to carry more individual responsibility for planning and managing systems, and to be more profoundly concerned with the role of libraries in our society.

Clerical and Subprofessional Staff

The foregoing discussion has been concerned with professional librarians in universities. The statistical tables at the beginning of the chapter, however, reveal that clerical, subprofessional, and supporting staff members considerably exceed in number the professionals, overall. Many aspects of daily operations, especially in the larger institutions, are highly dependent on the efficiency and effectiveness of staff members below the professional level.

An acute problem in the clerical and subprofessional staff category is rapid turnover. For a variety of reasons, there is a constant procession of individuals coming and going in libraries which employ any considerable number of clerks and subprofessional workers. There are no infallible solutions to the problem but it may be eased by improved salaries, better working conditions, opportunities for advancement, and more in-service training.

Summary

Many factors are at work to place the library in the forefront in the academic scene. Changing methods of instruction are sending students to their libraries in greater numbers. There is more pressure on faculty members to do research and writing — "publish or perish." Soaring student enrolments are placing a heavy strain on library resources, causing a building boom in colleges and universities throughout the country. The accelerated rate of publishing and of library acquisitions is responsible for the rapid growth of book collections.

As libraries rise in prestige in the academic world, college and university administrators are discovering that competent professional librarians are in exceedingly short supply. Simply having the money to develop a strong library may not be sufficient. Recruiting a staff means going out into a seller's market and meeting strong competition. The library schools are unable to fill the gap between supply and demand.

A variety of solutions suggest themselves. More library schools at the graduate level and aggressive recruiting of well-qualified students for the schools is one answer. A clear separation of clerical and professional duties in libraries will reduce the number of professional personnel required and free the professionals to carry on higher-level tasks. Also essential is full recognition of professional librarians as key members of the academic community, requiring high standards for their appointment to the staff, and then according them all the perquisites of faculty status.

The co-operation of the Canadian Association of University Teachers should be enlisted, if possible, in obtaining proper recognition of the academic character of professional librarianship, and thereby suitable status for university librarians.

To overcome salary handicaps of differentials between the salaries of librarians and of teaching faculty, a two-ninths supplement should be added to the salaries of librarians on 11-month appointments.

Frequent changes in clerical and subprofessional personnel may be alleviated by improved salaries, better working conditions, opportunities for advancement, and more in-service training.

7. Faculty and Student Views on Library Service

The most important clientele of college and university libraries are of course students and faculty members. Both groups are in an excellent position to evaluate the quality of the libraries serving them. In an attempt to discover their attitudes and opinions and to obtain specific suggestions for improvement, a series of questions were submitted to them, certain queries directed to the faculty and others to the students.

Faculty Views

Because of the possibility of too large a mass of returns to process economically — perhaps as many as 15,000 — faculties were asked to reply by departments rather than individually, though if there were strong minority views within a department, separate responses for these were invited. All departments were circularized in practically all the institutions and co-operation was excellent. The answers received represented the sentiments of thousands of faculty members.

Space will not permit an institution-by-institution summary of replies. The forms are being turned over to the librarians, who will find numerous recommendations therein for the betterment of their services and they will be in the best position to take effective action. A representative cross-section may be provided by answers from two institutions, the University of Alberta and Queen's University. A majority of other returns were variations on these responses.

The first query was: "In general, have you found the library's facilities adequate for student assignments? If not, please specify." At Alberta, 28 departments answered in the affimative, 6 in the negative; 6 said yes for undergraduate instruction, but no for graduate study. At Queen's, 15 answered yes, some with qualifications, and 8 no; 6 stated that facilities were adequate in their fields only for undergraduates. Specific criticisms offered at Queen's, many of them typical of other institutions, were delay in procurement of books ordered, insufficient copies, too many books out or missing, insufficient up-to-date books, frequent thefts, books lost were not quickly replaced, lack in range and depth of specialized literature, periodical and newspaper holdings inadequate, and insufficient attention to the needs of new departments.

Query number two read: "Do you occasionally have to restrict assignments because of the lack of materials in the library? If so, please specify." For Alberta, the response was: yes, 14; no, 18; have to restrict for undergraduate, but not for graduates, 4; do not have to restrict for undergraduates, but do for graduates, 5. Specific comments covering both the first and second questions were: the need for more copies of periodicals, the lack of material in some areas, the lack of back files of periodicals, and a need for more copies of books used for reference. At Queen's, 23 had to restrict assignments to a greater or lesser extent and 8 not. Again a distinction was made between graduate and undergraduate requirements, and there were pointed criticisms on the insufficiency of copies, not enough seating space in the library, non-availability of journals (especially for large classes) poor photocopying facilities, slow interlibrary loans, slow processing of new material, and lack of material on specific subjects.

Query three: "Are your teaching methods affected in any way by the lack of library materials?" In summary, at Alberta 15 replied yes, 25 no, and 1 no for undergraduates, but yes for graduate students. At Queen's, 19 answered yes (4 qualified), 15 no, and 2 no for undergraduates. The Queen's faculty amplified with statements on the need for better collections in certain fields, such as newspapers and documents; the difficulties in assigning research projects to students; the necessity for an instructor to lend his own books and periodicals; and excessive length of loans, inefficiency of the recall system, too much time required to process new books, and materials at bindery too long.

Query four asked: "Are graduate studies in your field restricted or made impossible by lack of suitable library resources? How, specifically?" At Alberta, 20 answered yes, 18 no, and 1 no for undergraduates, but yes for graduate. More copies of journals and lack of back files of journals were cited as specific problems. At Queen's, 22 replied yes (6 qualified) and 5 no. Such criticisms were repeated as delays in procurement of new material and binding, slow interlibrary loans, lack of documentary and newspaper material, and lack of material on specific subjects. A campus delivery system was recommended.

The fifth query is closely related: "Are there plans to develop or to strengthen your department for graduate studies that will require new library resources?" A majority of respondents at both Alberta (32 out of 41) and at Queen's (21 of 27) noted plans for developing or strengthening graduate programmes, all of which will necessitate an expansion of library holdings.

Query six is similar in intent: "Are there plans for new courses in your department that may require stronger library resources?" Many new courses in a variety of fields appear to be in prospect, based on the replies, practically all with library implications. At Alberta, 30 of 41 departments replied affirmatively, and at Queen's 27 of 34. Specific fields mentioned at Queen's, for example, were penology, history of the French language, comparative literature, legislative behavior, East European governments, Communist politics, linguistics, American literary studies, modern drama, film, Old and Middle High German, chemistry and biochemistry, neonatology, pathology, psychiatry, environmental engineering, transportation planning, Renaissance, accounting theory. A similar array of new courses was named in other Canadian universities.

Query seven introduced a troublesome matter: "Are courses introduced into the curriculum without proper support of library materials?" At both Alberta and Queen's, there is a problem, as in most colleges and universities. At Alberta 11 of 41 and at Queen's 13 of 31 departments agreed that at least occasionally courses were begun with inadequate library resources. Among the comments or explanations offered were that deficiencies only came to light during the course, there are procurement delays, the library needs more trained bibliographic help, new instructors are unfamiliar with library holdings, and it is assumed that library support for new courses will be forthcoming.

Query eight was: "Are you engaged in any research hampered by lack of library resources?" At Alberta, 23 answered yes and 18 no; at Queen's 19 replied in the affirmative and 18 in the negative, almost an even split. Some of the same complaints cropped up here as in earlier comments: delay in procurement, backfiles of periodicals deficient, interlibrary loan delays, need of duplicate journal files, and lack of resources in fields of research interest.

Query nine is closely related: "Have you had to give up contemplated research projects because of lack of adequate materials?" At Alberta, 7 of 42 said yes and at Queen's, 5 of 34, an encouraging percentage in both cases, indicating a dependence on interlibrary loans and the use of research libraries elsewhere. The increasing mobility both of faculty members and of library collections makes it unnecessary for an individual to rely entirely upon the holdings of a single library nowadays. One faculty member at Queen's, for instance, has travelled to Europe 10 times in the past 16 years to utilize European libraries.

The tenth item addressed to faculties, "Please list a few important titles, e.g., periodical files and large sets, to illustrate the materials that you believe should be acquired by the library," produced recommendations totaling thousands of titles of journals, newspapers, academy and society publications, large sets, compilations of original sources, government publications, specialized encyclopedias, microphotographic projects, series of theses, etc. The proposed acquisitions could well form buying guides for individual libraries or provide bases for co-operative acquisition programmes among groups of libraries. The total cost would strain the financial means of even the large university libraries, and unless co-ordinated could result in considerable unnecessary duplication. Titles acquired ought to be recorded in the National Union Catalogue or in the national union lists of serials.

The eleventh query, bearing upon the earlier discussion of shared faculty-library staff responsibility for collection development, was: "Do you participate actively in the selection of books and journals for the library's collections?" brought an almost unanimous affirmative response in universities and colleges all across Canada, though a fairly sizeable percentage failed to answer, perhaps indicating that some departments are not active participants in the selection process. At Alberta, for example, 10 of 52 and at Queen's 11 of 48 did not reply. Even so, it is highly encouraging to find that faculty responsibility in this fundamental area is so generally recognized.

Query twelve raised the always controversial matter of centralization versus decentralization of library service: "For maximum convenience for yourself and your students, is it preferable to centralize all library collections in the main library building or to place them in specialized departmental libraries elsewhere on the campus?" As could have been anticipated, opinions were widely split, some favoring complete centralization, some preferring a predominantly departmental system, many advocating a middle course, i.e., a combination of a central library and departmental libraries, and a number recommending mainly central service, but with small working collections in departments. At Alberta, for example, the voting was as follows:

Centralize	18
Departmental libraries	11
Faculty libraries	8
Central and departmental	5
No answer	10

At Queen's, the division was 15 for the main library and 22 for branches. The following comments offered by the departments at Queen's are pertinent: Everything should be available in the main library and duplicated in the branches as necessary. Rare material should be retained in the main library. Centralize, but have reading room in department for duplicates and reference works. Working collections in departments and clinical floors of hospital should duplicate material in Medical Library (Medicine). Centralize, with duplicates in branch libraries. Many of the sciences and applied sciences, art history, music, and business strongly prefer branch libraries.

These two universities constitute a fair sampling of faculty sentiment on the issue. Science departments almost invariably urge separate collections to serve their needs; the humanities and social sciences lean more toward a central resource, though there are exceptions in all categories. The newer universities, such as Brock and Lakehead, have majorities favoring centralization at present because of their limited collections, but anticipate departmental libraries later. In older institutions with reasonably strong holdings, majority sentiment is usually for separate departmental libraries. Thus, there is no clear and conclusive answer from the faculty point of view to this recurring dilemma.

Numerous constructive answers were received to the thirteenth question, "In what respects, if any, might the library's services become more effective in supporting your teaching or research?" Though there is considerable overlapping among the replies, their importance justifies a full summary. By individual institutions, the recommendations were as follows:

ACADIA: Establish film centre and slide collection (Art); more scientific journals; funds for foreign imprints; more staff for Chemistry Library; increase departmental library grant (Geology); speed ordering and processing; more comprehensive newspaper files.

ALBERTA: Improved information retrieval; quicker binding; duplicate copies of journals; delivery and book collecting service; more back files of journals; faster ordering, cataloguing and interlibrary loans; more specialized librarians; simpler and quicker circulation, improved reference service; departmental libraries; centralization; translation service for foreign periodicals; more flexible reserve book policies; more student instruction; longer hours; book selection specialists to help teaching staff; more government documents; better micro-reader service; special Canadiana library; better method of replacing lost books; extended loan of little-used periodicals.

BISHOP'S: Librarians with subject backgrounds; library funds should keep pace with University's growth; speed acquisition of top-priority books.

BRANDON: Revised circulation rules; copy service for 35 mm. slides; encourage student use; more security for collections; faculty carrels; book displays.

BRITISH COLUMBIA: Higher library staff salaries; install Xerox Copy-flo; staff for *Chemical Abstracts* searches; more reading of stack shelves; more borrowing restrictions; Xerox documents from government archives; shelve bibliographic materials in rational order; a geology librarian and a map library; faster binding; computerized cross-indexing; more discriminating purchase of nursing literature; automated bibliographic facilities; medical literature search by Medlars; restrict faculty loan periods.

BROCK: Improve interlibrary loan system; provide messenger service; start building collections for graduate programmes; extend hours; efficient system of recalling books; regularize reserve system; more duplicate copies; increase departmental budget allotments.

CARLETON: Make recent periodicals more visible; fast reproduction service; speed up acquisitions, processing, and interlibrary loans; geography classification scatters related materials; departmental libraries (Physics); separate documents centre; open shelves; library subject specialists; separate periodical room; more book funds.

DALHOUSIE: Increase communication between library specialists and faculty; teaching machines (Dentistry); centralize technical services; strengthen literature search service; newspaper clipping service.

GUELPH: Circulate journals to faculty; send journal tables of contents to faculty; build up complete journal sets.

LAKEHEAD: Departmental libraries; enlarge library staff; allow unbound periodicals to circulate; microfilm facilities; longer hours; more duplicates; speed processing.

LAURENTIAN: More professional librarians; enlarge collection; circulate second-hand catalogues; circulate latest periodicals to staff; publish library guide; more microfilm material; departmental library (Geology); longer hours; audiovisual aids; more documents and journals; speed processing; reduce long delay between ordering and receipt of books.

LAVAL: Lower photocopy prices; provide specialized research assistance; orientation for new students; departmental allocations for book funds; circulate periodicals to faculty.

MCGILL: Provide film library; carrels; reduce noise in library offices; more competent and co-operative staff (Islamic Studies); set up "antiquarian service" in Order Department; prompt follow-up of outstanding orders; improve staff cloakroom facilities; better cataloguing system; cheaper duplicating process; "unification of filing system" (Zoology).

McMaster: Speed up technical processing, binding, and interlibrary loans; provide more staff; establish undergraduate reading room; adopt acquisition policy; make periodicals more accessible; improve cataloguing; more duplicate copies needed; establish delivery system; provide departmental libraries; use more standing orders with publishers; more emphasis on service, less on acquisitions; automatic replacement of lost books; better circulation controls; twice-yearly-inventory; longer hours; better student discipline.

Manitoba: "Two year period between ordering and receipt should be shortened"; more blanket ordering; subscribe to *Chemical Abstracts* on tape; order missing items automatically; tighter controls to prevent book losses; more flexible application of rules; establish information retrieval system; delivery service to faculty; provide translation service; central film library needed; provide literature searching assistance; install system of programmed learning; offer orientation course in library use; complete card catalogue.

Moncton: More specialized material, more journal files; faster interlibrary loan service.

Montréal: Acquire more microfilm copies; underwrite Xerox cost in departmental libraries; stricter regulations for returning books; staff to assist faculty; better student orientation.

Mount Allison: A science specialist librarian; need reference librarian with knowledge of behavioral or social sciences; more highly developed reference services; card catalogue of area holdings in the Fine Arts Department.

New Brunswick: Better delivery service between libraries; common hours for all libraries; change from Dewey to Library of Congress classification.

Newfoundland: More of everything, funds and books; speed acquisitions, cataloguing, and interlibrary loans; more duplicate copies; provide departmental libraries; keep library open 24 hours per day, seven days per week; student instruction in library use; create separate undergraduate library; more seating and small reading rooms; open stacks; employ more staff.

Notre Dame: Need space, books, journals; inordinate delay in obtaining books; more duplicate copies; audiovisual materials needed;

provide record library and listening booths; larger and more specialized library staff; shelve current periodicals according to field; provide more seating.

NOVA SCOTIA TECH: Staff should be acquainted with Halifax-Dartmouth library resources; speed interlibrary loans.

OTTAWA: Provide bibliography checking service; reduce pilfering by stationing guard at library exit.

QUEEN'S: Faster ordering, processing, binding, and interlibrary loans; more duplicates in departmental libraries; strengthen government document collection; more up-to-date material; more book funds; back files of journals; central collection in Canada of all theses on microfilm.

ST. DUNSTAN'S: Specialized staff; information service for new periodical literature.

ST. FRANCIS XAVIER: Speed processing; more comprehensive acquisitions, especially journals; improve cataloguing; special attention to acquiring out-of-print books; film library needed; longer hours.

ST. MARY'S: Standing orders for university press books; order books direct from British and U.S. publishers; approve departmental budgets before start of summer vacation; shorten loan period; limit number of books borrowed by a student at any one time; open library 24 hours per day and do not circulate books; provide free duplicating services for materials from outside sources.

SIMON FRASER: Clerical tasks of ordering and checking should be assumed by library staff; police library to reduce noise; eliminate study hall function in library.

SIR GEORGE WILLIAMS: Speed processing; provide Xerox Copy-Flo; improve relations with European agents for out-of-print books; open stacks; separate undergraduate reading room; prompt replacement of lost books; more foreign language material; better reference service; faster interlibrary loans; more work space in stacks; more professional searching aid; film library; newspaper clipping service.

TRENT: Increase acquisitions rate, especially of periodicals; develop specialized materials for research; speed processing; establish acquisition policy; long-range development programme; report on outstanding book orders; provide more duplicate copies; improve interlibrary loan system.

SASKATCHEWAN: Close stacks; stop loaning journals; computerize catalogue; research on storage and retrieval of non-book resources.

SASKATCHEWAN (REGINA): More detailed cataloguing; acquire and process $250,000 worth of mathematics literature; arrange uncatalogued books by subjects; reserve some library space for graduate students and faculty.

TORONTO: Encourage annual buying trips to relevant Oriental countries; reclassification needed; establish teaching aid section; open stacks; a less burdensome check-out system; better delivery service; place desk calculators near statistical collection.

WATERLOO: Process subscription orders all year; catalogue journals; provide analytics for serials; more subject headings in catalogue; establish government documents library; courier service for telephone orders.

WATERLOO LUTHERAN: Faster processing; more duplicate copies; more book funds; Xerox service in library; more bibliographical checking by library staff to fill in collection; open stacks; allow faculty to withdraw interlibrary loans from library; shelve all science material together.

WESTERN ONTARIO: Computer searching of subjects and authors; standing orders for university press books; formal instruction in library use for graduate students; specific book fund allotments to departments; duplicate rental collections; survey holdings to eliminate gaps and to ensure methodical growth.

WINDSOR: Speed technical processing and photocopying; more specialized staff; individual notification of book arrivals; translation service; speed interlibrary loans; current periodicals available more promptly; more library staff responsibility for book selection; standing orders for university press books; extend hours; procure listening equipment; reserve reading room with open shelves; music cataloguer needed.

YORK: Computerize procedures; easier access to other Canadian collections; acquisition policy statement for sciences, prepared with faculty assistance; aggressive programme of acquisitions for government documents.

Summary

If one were to attempt to draw a profile of a typical faculty member and his attitude toward library service on the basis of the foregoing recommendations, it would have certain definite features:

1. The need for stronger research collections is emphasized, including especially journal files, government documents, newspapers, and foreign publications.
2. Library staff specialists appointed for collection development and for reference and research assistance.
3. Speeding up all technical processes — acquisition, cataloguing, binding, photocopying, and placement of more standing orders.
4. More duplicate copies of books in frequent demand and prompt replacement of lost books.

5. Better student instruction in the use of books and libraries.

6. Special provisions for graduate students and faculty members with separate facilities for undergraduates.

7. Improvements in interlibrary loan system, provision of delivery service to faculty offices, and longer hours of opening.

8. More departmental libraries, especially in the sciences.

9. More efficient circulation systems and policies, and tighter control to eliminate book thefts.

10. Introduce automated procedures as rapidly as possible.

The final query addressed to the faculty, number fourteen, read: "What libraries do you use regularly or occasionally other than that of your own institution?" The replies listed a much wider range of institutions than were included in the discussion of interlibrary loans, in the chapter on "Readers' Services and Use." The data also form an important supplement to the chapter on "Library Co-operation and Interrelationships." Among the scores of libraries mentioned, Canadian institutions were most numerous, including other university libraries, the libraries attached to federal and provincial governments, special libraries belonging to associations, businesses, and industries, and large public libraries. Many foreign libraries were listed also, especially the great national libraries, such as the British Museum, Bibliothèque Nationale, and Library of Congress and the major American university libraries. It is obvious that scholars are prepared to go wherever the books are, regardless of location, as was brought out in the responses to queries eight and nine above, dealing with faculty research activities.

Student Views

The special questionnaire designed to assess student opinions on the services received from their libraries was administered in different ways in different libraries. In general, the plan was to select a typical day during a regular term, not too close to vacations or examination periods, and to hand out a copy of the form to each person entering the library. The student was asked to complete and return the questionnaire as he left the library building. In some instances, students using departmental collections, as well as the main library, were polled. Students at all levels, men and women, from freshmen to doctoral candidates co-operated in giving the study team the benefit of their special points of view.

The following summary, prepared in part by the individual libraries, indicates the types of questions asked and the replies, together with comments. All told, the summary represents several thousand students in a variety of institutions.

Canadian Survey Student Questionnaires

Institution	*Why in library?*	*Did you obtain material sought?*		*If not, why not?*	*Quality of Service*		*Library User*	*Comments*
Alberta	Assigned reading and look up problems or topic	Yes No	119 26	Lost; not available here; out; not enough copies	Good Fair Poor	129 19 1	All student levels	Too crowded; lack of science texts; excellent facilities; slow shelving; too noisy at times; open until midnight; staff friendly, helpful; borrowing period should be one week; carpeting to help noise
Carleton	Assigned reading; look up topics; general reading	Yes No	123 63	Too few copies; out; not in collection; missing	Good Fair Poor	121 55 5	All levels	No comments forwarded
Dalhousie	Most for study; some for reference books	About half and half		Same as above	Majority satisfied		Random group	Revise circulation rules; staff is courteous and helpful; longer hours; publicize library instructions and regulations
Emmanuel	Look up topics; assigned reading; study on own; return and renew	Yes No Not recorded	28 11 17	Library doesn't have; not on shelf; in use	Favorable comments re staff		All levels	Physical conditions outweigh favorable comments; some suggest change in loan policies
Jean-de-Brébeuf	Same as above	Yes No	51 5	No access to stacks	Good Fair Poor	48 11 0	Under-graduates	Longer hours; open stacks; need orientation
McGill	Assigned reading; study own books	Bare majority did		Out; could not be found	Good Fair Poor	30% 50% 20%	All levels	Crowding and noise; lack of books; slow circulation desk service; restrictive practices re stack permits, etc.
Manitoba	Most for general reading or own books; look up topic; assigned reading; return or renew	Yes No	1,457 492	Out; couldn't be found; library didn't have; turned out to be useless for my purpose	Good Fair Poor	1,538 481 74	All levels	Comments not forwarded

Institution	*Why in library?*	*Did you obtain material sought?*	*If not, why not?*	*Quality of Service*	*Library User*	*Comments*
Mount Allison	Assigned reading; study own books; general reading	Yes 54 No 15 Both 5	Not in library; in use; missing	Good 63 Fair 15 Poor 1 (Excellent 1)	No indication	None
Mt. St. Vincent	Assigned reading; look up topics; general reading; use own books	Yes 75 No 20 Sometimes 9	No replies	Good 89 Fair 17 Poor 0	All levels	Commented some subject deficiencies; revise circulation regulations; co-operative efficient staff; studious atmosphere good; libarians are available—courteous
Notre Dame	Assigned readings; use own books; general reading; to study			Good 81% Fair 14% Poor 2.5%	All levels	Library very good for size of university; physical problems got most complaints
Queen's	Assigned reading; locate topics; general reading; use own books	Yes 582 No 110	No replies	Good 579 Fair 122 Poor 11	All levels	Longer hours; more microform equipment; more books in certain areas; multiple copies; circulation regulation revision
St. Dunstan's	Assigned reading; look up problem; general reading	Yes 135 No 15	In use; not available; shortage of periodicals	Good 141 Fair 18 Poor 3	Undergraduates only	Personal service OK; added copies needed; relocate noisy Xerox
St. John's	Assigned reading; look up problem; general reading	Yes 59% No 12.5%	On loan; not available; none on topic; not known what to find it under	Good 64% Fair 11.5%	All levels	Noise; physical problems; freshman orientation needed
St. Mary's	Assigned reading; use own books; general reading	Yes 131 No 31 Partly 27	Lack of material; on loan; inadequate copies	Good 169 Fair 17 Poor 3	All levels	Circulation and staff praised; some note collection lacks; longer hours

Institution	*Why in library?*	*Did you obtain material sought?*	*If not, why not?*	*Quality of Service*	*Library User*	*Comments*
St. Michael's	Assigned reading; use own books; specific books for class	Yes 29 No 6		Good 32 Fair 1 (Excellent 2)		Revise circulation regulations; some subject gaps; more duplicates
Sherbrooke	Use own books; assigned reading; look up topic	Yes 282 No 67	Books out; not in library, unavailable; not enough copies; limited resources; missing	Good 283 Fair 84 Poor 7	All levels	Shorten loan period because of stock; excellent service; more supervision; longer hours; physical facilities
Trent	Assigned reading; use own books; look up topic	Yes 37 No 15	Books out; not owned by library	Good 43 Fair 6	Under-graduates only	Only 12 ventured comments
Trinity	Not answered	Yes 39 No 14 Partly 15	Not answered	Good 62 Fair 3 Poor 1	All levels	Many say excellent service; some subject gaps mentioned
British Columbia	Studying; borrowing; consulting	Reserve books usually not not available	Need more copies on reserve	Not really answered	Not indicated	40% say book collection not adequate; 25% say journal collection not adequate; overheating in main library; need for orientation and guidance; longer hours; more space
King's	Assigned reading; look up topic; use own books	Yes 33 No 6	Book in circulation; not owned by library	Good 47 Fair 7	All levels	No comments forwarded
New Brunswick	Borrowing; stack use; consulting; use own books	Not answered	Not answered	Good 865 Fair 111 Poor 10	All levels	More hours; more space; more journals; *excellence of staff is commented on by 40*

Institution	*Why in library?*	*Did you obtain material sought?*	*If not, why not?*	*Quality of Service*	*Library User*	*Comments*
Ottawa	Consulting; use own books	Yes 25 No 21 Yes 26 } Science No 12 }	Not answered	Good 10 Fair 20 Poor 12	Not indicated	Poor physical conditions; need more books; card catalogue not up to date
Toronto	General reading; current periodicals; work on thesis; returning books	Yes 51%	Not in coll. 7%; on loan 16%; not located 4%	Excellent 33% Good 44% Fair 15% Poor 3%	All levels	Undergraduate reports slow main desk service; poor ventilation and noise
Victoria	Study own; look up topic; assigned reading	Yes 143 No 118	Library didn't have; not on shelf; in use	Not used	All levels	30 praised library generally; 20 liked staff service; 58 mentioned subject fields where there are gaps; revise circulation regulations
Waterloo	Study own books; look up for class; assigned reading; general reading	Yes 658 No 205	Out on loan; not in library; not sufficient copies; mislaid	Good 699 Fair 178 Poor 16	All levels	Noise; more hours; too hot; shortage of books; 26 generally satisfied with service; faculty and students criticized the Science Library collection
Waterloo Lutheran	Assigned reading; look up topic; use own books; general reading	Yes 240 No 127	Not in library; on loan; missing; lack of back files	Good 276 Fair 82 Poor 12	All levels	General complaint—lack of material; students can't use University of Waterloo

Not included in the foregoing summary were several other colleges and universities which, however, forwarded comments from their students, as follows:

Institution	*Comments*
Huron	Very good collection and service; need depth in Canadian history; not enough copies; *periodical holdings weak;* some kept three years and discarded?
Lakehead	Orientation needed for freshmen; *excellent service;* several requests for longer hours
Loyola	Several comments re noise; crowded; poor ventilation; several compliment service; one really hit service— "poor, library attendants mistreat students;" guards boorish
Collège Saint-Laurent	Open stacks; can't take over 4 volumes now; each department develop reference libraries; some subject areas require broadening; need journals (*Playboy* mentioned); stop fines; too expensive for students
Collège Sainte-Marie	Need more copies; staff mostly co-operative; new check-out system is absurd; reference help tailored to student needs; physical problems
Simon Fraser	Need for copies; more space; quiet; slow check when leaving; considerable resentment of a "little old white haired" man on staff; briefcase check annoying
United	"Pitiful resources"; catalogue poor and non-current; several compliments on staff service; noise; space needs

Several unversity libraries had taken surveys of student opinion prior to receipt of the survey team's form, or modified the form to fit their own local situations. One of the former was the University of British Columbia Library, which collected a mass of students' comments dealing with virtually every aspect of the students' relations with the Library — many of which, in fact, would probably never have occurred to the librarians. Some remarks would apply uniquely to British Columbia, though the majority could be heard on any large university campus. The entire assemblage of quotations is too lengthy to cite in full, but the following are a representative sample:

> More copies of assigned reading material.
>
> I dislike the present library set up. Books will be listed in main catalogue but *often* one has to travel all over campus to different buildings to obtain them; very time consuming.
>
> Decentralization of book locations is very inconvenient for this casual library user. On seeing a call number in the main library indicating the book is in the Woodward library it is very easy to say "the hell with it!"
>
> The attempts by the library staff to make the library of as much service to students as possible is greatly appreciated.

I am concerned that rather than having one centralized library for all faculties there will be a number of small libraries scattered over the campus and this will be of detriment to undergraduates.

Unify the entire mess into one library.

Most books of concern to me in UBC Library are out of date (specifically—mining, etc.).

I find a great lack of "up-to-date" physics texts in particular.

The *important* reference books that have been misplaced, lost, or stolen should be replaced as soon as possible after they are noticed missing. When several people make a request for the same book in a short space of time and it is lost then it is obviously important enough to be replaced.

Turn down heat in Main Library *at least* 10°F; it gets unbearable to work in there.

Your British History Section is pathetic for a university which intends to make any claims to first-class stature.

I think the library staffs are doing a fantastic task in servicing and catering to the needs of the students. Keep up the good work. — a grateful student.

Get the Frosh out of Woodward!—Woodward is a Bio-Med. Library!

Keep Commerce & Art types out of Woodward's at night.

Use of Woodward Library should be restricted to students of Medical, Biological and related sciences in order that adequate study space will be available.

Too hard to get books for Zoo courses. A few people tie up books for too long.

I resent Frosh and Sophomores cluttering up the Main stacks.

The damn xerox machines are too expensive. It only costs the Library 3 cents a copy, so why charge us 10 cents?

The lighting could be drastically improved in the main library stacks.

Some clerks in Woodward Library are not too restrained in checking briefcases for library books when students are leaving. I realize that this is a necessary procedure, but I feel that the clerks carrying out this operation could be more diplomatic.

People often smoke in areas where they aren't supposed to (Woodward)—this is annoying to non-smokers who are trying to study.

It would appear more than obvious that the volumes of journals in most demand are those for the previous year. Why are they taken away for binding for as much as 3 months during this time.

Unlimited time limit on books given to professors and graduate students—a long loan period possibly, but with next to unlimited time they either forget they have the book, or just keep it to feel comfortable.

Compliments are due to the competent library staff!

Longer library hours during and before exams.

I wish librarians would refile reference books in the evening that were taken off the shelves during the day. They pile up on the tables and stay there for a week and it's impossible to locate them, especially bound journals.

We need more copies of books, e.g., There are 150 people in my theatre class and approx. 10 copies of each play we study. We do 1 play each week and it is almost impossible to get hold of the plays when you need them.

There should be some control on noisemakers.

Policy in Woodward Library of evicting couples sitting at the couches underneath the stairs. This to me seems a quite ridiculous way of handling students of our age and maturity.

More stringent regulations should be enforced to prevent theft of books.

Most important: copies of books that have been lost or stolen are not replaced for *years!*

How about a union catalogue for the whole campus? Or at least list Sedgewick books in the main catalogue.

Poor lighting and ventilation in study areas.

Main lib. usually *TOO HOT*.

Three-quarters of the books I want, I can never find due to — it being lost, sitting in carrels, misshelved, not enough copies, or they are unuseable due to the fact of being available for 2 hrs. or overnight usage. When I leave the library, I am frustrated, due to the goose chase of looking for books. In fact I find more of books at Public Library.

Noise throughout the entire library is unbelieveable.

17,000 people cannot sit in 2,800 + desks. Solution A: More desks. Solution B: Less people.

Getting too many overdue notices when I have returned books on time.

I would like to see Xerox machines (individually operated) in the main library.

The commissionaire is effective in quietening the students but the librarian and library staff talk louder and longer than the students.

It is common practice, I believe, for students to stake a claim on a study carrel by leaving books on table in the morning—going to classes and coming back in free time. This is an abuse.

Students are often unable to get certain books because profs have them on lengthy or indefinite loan—this is unfair.

Journals must be for Library use only. No point in lending them out.

I'd also like to see the main library open until midnight.

Card catalogue incomplete and not up to date. Prefer to work from a central catalogue for all university libraries.

I believe the library system has vastly improved over the last few years. However, I believe that more help should be given to students wishing references not pertaining to their courses.

I find that the library books are tied up too long in cataloguing, binding and reshelving.

The main library is extremely understaffed.

It is said that the library has about 40,000 books etc. as yet uncatalogued and that some of those items are several years old. Surely additional staff must be employed to rectify this situation.

A surprising—and to some—disturbing fact is that a large percentage of students on all campuses come to the library to study from their own books and notes. The explanation usually is unsatisfactory study conditions at home, whether in a dormitory, rooming house, fraternity, or elsewhere. Separate study halls are not the answer. Students prefer the library atmosphere in which to work. Nor should they be discouraged from coming to the library, even though they are not using library materials; the exposure to books is healthy and often results in the students becoming active library users.

Of students who state that they failed to accomplish the purpose for which they came to the library, the most commonly indicated reasons were: others had checked out books wanted, library did not possess particular items wanted, material was in another library elsewhere on campus, not enough copies of reserve books, books wanted could not be taken from the library, library is too noisy (or too hot or too poorly ventilated or too crowded) for study, materials wanted were missing. there was insufficient time, and assistance from library staff was inadequate. Several of these matters are capable of solution by the library staff, others may be more difficult.

Indefinite or extended loans to faculty members and graduate students are resented by both undergraduates and some graduate students, because they make materials unavailable to other potential users for long periods of time. The scattering of collections among departmental libraries is also regarded as a serious inconvenience by a majority of students.

Summary

As prime consumers of library services, students are in a key position to evaluate them, at least from their particular viewpoints. The many constructive suggestions and criticisms offered in response to the student questionnaire should be given careful consideration by the library administration on every campus, and if reasonable, desirable, and feasible, efforts should be made to follow them.

Also highly useful and significant are the recommendations emanating from the several thousand faculty members who participated in the faculty opinion poll. The mature, thoughtful views, often based on experience in a number of libraries, expressed by faculty members can be invaluable to the library staff in establishing a strong organization and effective services.

8. Library Automation and Mechanization: The Promise and the Reality

Automation has emerged as one of the magic words of the current era. The term may invoke visions of tireless, ingenious machinery taking over man's age-old burden of work, requiring only casual attention from a carefree human race. Others see it as a nightmare, creating a frustrated, idle population denied employment, rendered obsolete and even hungry by robot machinery.

Neither of these concepts is realistic. Automation may contain elements of both good and evil, but its potentials for good are preponderant. Automation devices are the most recent and dynamic extension of the industrial revolution which increased man's welfare by substituting powerful machines and energy sources for muscle power.

The library world is a tiny segment of the vast areas to which automation is being, or is capable of being, applied. Within its relatively narrow framework, however, applications of automation and mechanization may bring important benefits to the whole scholarly and scientific community.

The accelerated growth of research libraries in recent years has caused many stresses and strains in their operations. As stated in the landmark report entitled *Automation and the Library of Congress,* "These areas of concern include mounting arrearages in cataloging and other processing activities; increasing complexity of manual inventory control files; increasing difficulty in keeping card catalogs reasonably current and accurate; and increasing demands for a wide variety of services for a clientele whose needs for information have grown tremendously since World War II, and many of whom have only recently turned to large research libraries for help."

The report of the Library of Congress blue-ribbon survey team, quoted above, reached several significant conclusions: First, automation can, within the next decade, augment and accelerate the services rendered by large research libraries and can have a profound effect upon their responsiveness to the needs of library users. Second, automation of bibliographic processing, catalogue searching, and document retrieval is technically and economically feasible in large research libraries. Third, the retrieval of the intellectual content of books by automatic methods is not now feasible for large collections, but progress in that direction will be advanced by effective automation of cataloguing and indexing functions. Fourth, automation will enhance the adaptability of libraries to changes in the national research environment and will facilitate the development of a national library system. Fifth, finally, automation will reduce the cost-to-performance ratio; however, libraries should aim at the expansion of services rather than the reduction of total operating costs. These judgements have been validated by all experiments and investigations to date.

Considerable impatience has been expressed by scholars and scientists about the seeming reluctance of professional librarians to accept computer centered literature searching systems as the solution to bringing the "information explosion" under control. The traditional library system, viewed by one unfamiliar with the complexities of the problem, is antiquated and cumbersome. The rapid advance of computer technology and its possible application to libraries, in particular, has caught the public fancy. The potential uses of the computer not only for the manipulation of data but for the storage and retrieval of information have led many to believe that such equipment is already operational rather than merely offering future possibilities. Thus there are extravagant claims about current capabilities and impatience because libraries have not made more significant progress toward the digital storage of their informational content.

An example of such fantastic prophecies and "blue sky" thinking is a statement issued by Dr. Gustave Arlt, of the U.S. Council of Graduate Studies, "library expert" on the Spinks Commission for the study of higher education in Ontario. As quoted in the press, Dr. Arlt proposes the substitution of "Unilib, a centralized super library" instead of spending the considerable sums required for the development of individual university libraries in the province. "Unilib," it is asserted, "would use a computer to obtain ideas and facts for any researcher in the province, thus providing a high-quality service without the costly duplication of 14 library systems." Computers at the centre of operations, it is said, would catalogue information for all university librarians in Ontario. Later teletype and photocopy links between the universities and the central "brain" would eliminate the need for a student or professor actually to borrow a book. He could have "canned" information instead. Later still would come "instant" research with use of closed-circuit TV.

Descending from the clouds, hard-headed facts are represented in a statement made by Dr. Burton W. Adkinson, Head, Office of Science Information, National Science Foundation, Washington, D.C.: "There is a certain lack of realism about what automation can do. For housekeeping detail, record keeping, and even manipulating files as an aid in searching through them they are probably invaluable. The day when they will provide a complete reference service without human intervention is still far down the road. Failure to recognize this limitation, and resulting over-optimism as to manpower savings and reference efficiency, is not likely to sit well with government granters. Most of them have been burned by certain projects that didn't pay off as promised."*

Nevertheless, hundreds of university and research libraries are attempting to provide more efficient service by adopting data processing equipment to perform operating routines. Many and varied computer programmes have been written to solve library problems. The most common types have to do with the use of computers for supporting the clerical functions found in technical processing and circulation work. Several libraries have had programmes written which cause computers automatically to perform certain routine work, such as interfiling entries in a catalogue, ordering books from publishers, ordering printed catalogue cards, preparing serial records lists, monitoring circulation operations, printing book catalogues, and analyzing services to readers.

Much less progress has been made in the application of computer technology to the field of information storage and retrieval, where the aim is to extract the intellectual content of texts. If the purpose is to correlate facts and relationships from the complete contents of books, the problem becomes exceedingly complex and costly. It is possible that as the storage capacity of computers increases and as costs decrease it will be possible to store far greater quantities of information digitally than it is at present. It is highly questionable, however, whether it will ever be economical and desirable to store vast quantities of information for infrequent use. At this stage in history, the flexibility, economy, ease of use, and information storage capacity of the traditional book is still unmatched.

An authoritative article** by Donald P. Hammer of the Purdue University Libraries reviewed "the specific library operations that readily lend themselves to automation at the present developmental level of both the library and the machine." Mr. Hammer reported numerous applica-

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*Adkinson, B. W. "Implementing Programs Through Proposals." Allerton Park Institute, *Federal Legislation for Libraries*, Champaign, Ill.. Illini Union Bookstore, 1967. p. 63.

**Hammer, Donald P. "Automated Operations in a University Library — a Summary." *College and Research Libraries*, 26 (January 1965), 19-29, 44.

tions of automation techniques in actual operation, or in his view readily feasible, in the following areas: computer catalogues (basic to all other automated operations), serials control, binding records, gift and exchange transactions, acquisitions cataloguing, circulation, reference work, interlibrary loans, technical reports collections, budget and accounting, and library office routines.

Canadian Developments

In March 1966 there was convened on the Université Laval campus a "Conference on Computers in Canadian Libraries," attended by representatives of 10 major university libraries, the National Library and National Research Council, and the library schools of British Columbia and Toronto. The two-day session was devoted to a review by librarians and systems analysts of current applications of computers in Canadian libraries. Also explored were "the implications of library computerization within a national context." A report of the conference was prepared for and distributed to the members of the Canadian Association of College and University Libraries. The principal examples of applications, as described by the participants, were as follows, arranged by area of activity:

Acquisitions. At the time of the conference, the only university library in Canada with a design for an acquisition system was at Simon Fraser University. The system captures bibliographic and order information prepared in the acquisition division and uses it for automatic preparation of purchase orders, cataloguing work sheets and internal business records. The information is revised and used later to produce catalogue cards and circulation book cards. The Library shares an IBM 1440 Central Processing Unit with the Bursar and the Registrar. Acquisitions information was being punched on conventional 026 keypunches, but it was planned later to use IBM 1050 punches, with upper and lower case capability.

Serials. A number of libraries had used data processing equipment to prepare basic lists of serial holdings: Laval, National Science Library, Waterloo, Dalhousie, British Columbia, and Simon Fraser. At Laval, a system was in operation for automatically updating and revising its holdings. The Laval serials system was reported to produce the following lists: an annual list of all current serials received, weekly lists of current serials received, a list of serials subscriptions by date of renewal, lists by library location, and subject lists. The National Science Library's recently-published second edition of the *National Union List of Scientific Periodicals* was computer produced. The NSL also produced automatically daily current lists of new arrivals of about 800 journals of special importance.

Government Documents. The National Science Library uses a keyword-in-context programme to index the publications of the National Research Council.

Cataloguing. Data processing equipment has been used in Canada to produce book catalogues, subject lists, and accession lists. To bring under control a growing backlog of uncatalogued material, British Columbia gives each item an accession number and keypunches a brief entry. The resulting cards are used to produce monthly lists of accessions of both catalogued and uncatalogued material, and to produce cards for filing in the main catalogue, providing access by main entry.

Laval created an authority file in French and has devised a system of listing and updating the headings and cross references. There is a total of about 18,000 headings.

The Ontario New Universities Library project, undertaken by the University of Toronto Library on behalf of five new university libraries in Ontario, selected, acquired, and processed undergraduate material for the five libraries, totaling 35,000 titles in 45,000 volumes. Author, subject, and title book catalogues were prepared for the libraries, using data processing equipment.* Those concerned with this project concluded that book catalogues do not satisfactorily meet the needs of a growing collection and also cost substantially more to produce than card catalogues.

Documentation. The National Science Library has been making use of *Chemical Titles on Tape* to provide a selective dissemination of information service for a group of National Research Council scientists.

Developments at Université Laval have been most extensive, working through its Centre de Documentation, in co-operation with the computing centre. A unique programme, known as ASYVOL (Analyse Synthétique par Vocabulaire Libre), developed there does not limit the number of terms used by the indexer. This programme has been used to compile the monthly *Index Analytique,* an index to 60 French and French-Canadian periodicals; an inventory of 20,000 French university theses; an index to the *Canadian Historical Review* for 1950-1964; and an index to the newspaper *Le Devoir.*

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*Described in: Bregzis, Ritvars, "The Ontario New Universities Library Project — an Automated Bibliographic Data Control System." *College and Research Libraries,* 26 (Nov. 1965), 495-508.

Supplementing the report of the proceedings of the conference at Laval the questionnaire form distributed by the AUCC study team inquired of each library included what application, if any, it was making of data processing, automation, or mechanization to library operations, together with comments on future plans. A summary of pertinent replies follows:

UNIVERSITY OF ALBERTA. The Library plans an automated circulation system by September 1967. Plans call for the introduction of automation also into periodical records and order clerical processes. The University is acquiring an IBM 360-67 computer to which the Library will later be connected.

UNIVERSITY OF BRITISH COLUMBIA. The Library has been using data collection equipment since September 1965 to record book circulation. The system used is an IBM 1030, consisting of 14 terminals connected to a central punching unit. The transaction cards produced at the punch are processed on a computer once daily to provide a list of outstanding loans for each library in the system. Statistical reports are produced as well as overdue notices, fine calculations, and call-in notices. A historical record is kept of all transactions for future use in inventory evaluation and usage analysis. The use of the punched book card for producing monthly accession lists and to control the backlog of uncatalogued material in the UBC Library was described above. The conversion of information about serial subscriptions and holdings to machineable form was completed in 1966 and a published list issued in 1967. As for future applications, the Library expected to give over to a computer in the spring of 1967 most of the clerical routines in acquisitions involving the maintenance of author files and accounting-budget records. The information in the computer record would be used also to provide circulation book cards, accession lists, and to maintain a master machine record representing all the items in the collection. For serials, the traditional visible card file will be transferred to a machine record during 1967, and all incoming material will be checked in using a punched card predicted arrival file. From the computer record will be available periodic lists of titles and holdings, current arrivals by location, lists of items that should be claimed, lists of titles complete for binding, etc. The Library is well equipped with data processing "hardware," including a Honeywell H.200 computer, and has access to an IBM 7040 computer on campus.

BROCK UNIVERSITY LIBRARY has prepared a list of its serial holdings on IBM cards. Equipment available on the campus includes IBM units 407, 026, and 083.

UNIVERSITY OF GUELPH. Projects under way in the Library include serials check-in control, mechanized acquisition list, mechanized organization and control of government publications and research bulletins, and conversion of shelf-list to machine readable form. In the planning stage are the production of book cards for an automated circulation system to be installed in a new library using IBM 1030 data collection system; and an integrated automated system for entire library operation from acquisitions to cataloguing, book processing to circulation. Available on the campus is the following data-processing equipment: IBM 360-30, IBM 1401 printer, sorters, collators, key punches, etc.

UNIVERSITÉ LAVAL. Some of the unusual and significant undertakings at Laval in the automation field were noted above. The applications of computer technology to library operations there are the most extensive, comprehensive, and sophisticated of any Canadian university and doubtless of any American university. A detailed review of activities accomplished, in progress, or in the planning stage has been issued.*

An enterprise of extraordinary interest and importance in the field of information storage and retrieval is in progress at Laval. As recently described in *Canadian University*,** the Library is classifying, coding and putting on microfilm millions of documents on every subject of conceivable interest to researchers, faculty members, and students. For this programme, Laval has installed the new Recordak Miracode retrieval system. This push-button system can search and locate within six seconds any required document from a microfilm file of more than 1,000,000 entries. The required data are automatically displayed on a reader screen, and, if needed, a paper copy can be produced immediately. The documentation centre films about 5,000 pages and 300 codings each day. The Director of the centre, Guy Forget, is chairman of a special committee set up by the Conference of Rectors and Principals of Quebec Universities to co-ordinate documentation among and to inventory research materials available in Quebec universities.

MCGILL UNIVERSITY LIBRARY. A Systems Analyst was appointed to the staff on December 1, 1966, and is currently planning the application of automation to periodicals, circulation, and order work. An IBM 7044 and IBM 1401 Unit Record Equipment are available on campus.

UNIVERSITY OF NEW BRUNSWICK LIBRARY has long range plans for mechanization in ordering, circulation, cataloguing, serials, and information, in that order. IBM 1620-II and 360-G50 digital computer systems are available in the University.

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*Université Laval, Comité pour l'Automatisation des Services de la Bibliothèque de l'Université Laval, *Rapport*, April 1966.

**v. 2 (March-April 1967), p. 53.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND LIBRARY has issued a tabulator print-out of a short-title bibliography (8,000 titles), and a serials print-out with holdings. The automation of circulation is being studied. IBM 1620 and 360-40 computers and other data-processing equipment are available on the campus.

UNIVERSITY OF OTTAWA LIBRARY is issuing periodical lists, and planning to automate order work and circulation, using an IBM 360-40 computer.

QUEEN'S UNIVERSITY LIBRARY has made plans to mechanize acquisitions, serials, and circulation in 1967. An IBM 360-40 computer is available. A Systems Analyst has been appointed.

UNIVERSITY OF SASKATCHEWAN LIBRARY plans a circulation system using IBM 357 and 7040 computer to become operational in September 1967. Cards are in process of being punched. Either serials or acquisitions control will follow.

SIMON FRASER UNIVERSITY LIBRARY has installed an IBM 1030 circulation control system, an IBM teleprocessing system for acquisitions, and other data-processing equipment.

SIR GEORGE WILLIAMS UNIVERSITY LIBRARY has a computer-produced serials list. Future plans call for complete systems analysis and automation where feasible and desirable. An IBM 1620 and accessory hardware are available.

UNIVERSITY OF TORONTO LIBRARY compiled by computer book catalogues for the Ontario New Universities Library Project, 1963-67; since November 1966 it has participated in the Library of Congress' MARC (Machine Readable Cataloguing) experimental project; is making plans for circulation and serials control; and is also engaged in preliminary planning for an integrated bibliographic control system.

UNIVERSITY OF VICTORIA LIBRARY appointed to the staff in 1966 a Systems Analyst who is working on automated routines. An IBM 360-44 computer is available.

UNIVERSITY OF WATERLOO. As investigation is being made by the University's Systems and Procedures division to decide what available automated library circulation system is best adapted to the needs of the Library, and to recommend other possible applications of automation to library routines. An automated circulation system is expected to be operational by January 1968. An IBM 360-40 computer has been installed on the campus. The Library has its own key-punching equipment.

UNIVERSITY OF WESTERN ONTARIO LIBRARY is processing its acquisitions with magnetic tape. Serials acquisitions are to follow. An IBM 360 and several other IBM computers are available in the University.

University of Windsor Library has installed an IBM 357 circulation control system. There are tentative plans for the automation of acquisitions, serials control, and budget control by 1969.

York University Library is automating acquisitions fiscal control and serial records in 1967, and expects to mechanize its circulation procedures in 1968. An IBM 360 computer and accompanying hardware are available on the campus.

Judging from the foregoing developments, the leading Canadian university libraries are taking automation seriously. A good number of successful applications of new technologies have been made, and experiments are under way which will doubtless help determine future directions for library administration and operation.

Electronic Facsimile Transmission of Library Materials

The field of telefacsimile and its potential applications to libraries is of such wide interest and concern to scholars, scientists, and librarians that it merits separate discussion. Electronic transmission of printed material has been practicable for some years, and commercial equipment for the purpose is available. Those unfamiliar with cost factors, the exact state of the art, and other complexities theorize that if library materials can be transmitted instantaneously over long distances, only a few large libraries—perhaps a single library—could serve a nation's needs, eliminating the necessity for developing multiple regional and local collections.

Two machines for facsimile transmission are offered by the Xerox Corporation. Neither will copy directly from a book. Instead, before material can be sent, a copy on a separate flat sheet must be made, adding to the expense and time. The first machine, LDX (Long-Distance Xerography) requires a cable or microwave circuit between terminals. The Xerox Corporation rents the terminals and the telephone company the link. The second machine, the Telecopier, uses a conventional long distance telephone circuit, rented for the period of transmission. The scanning and receiving equipment is designed to receive the telephone mouth and earpiece, and the image is transmitted by a tonal interpretation of the document as it is scanned.

Making use of the Telecopier, a 30-day experiment in interlibrary use of telefacsimile was carried on between campuses of the University of Nevada and University of California. Three libraries were involved: the University of Nevada at Reno and its Las Vegas campus (Nevada Southern University), 345 airline miles away, and the University of California campus at Davis. The Xerox Magnavox Telecopier system includes a transreceiving set, about the size and weight of an office electric typewriter and a telephone coupler at each library. Copies of printed pages, typescript, manuscript, or pictorial material may be transmitted for any distance over a single voice-grade telephone, to any location where there is a telephone and a corresponding telecopier unit. The installation procedure involves nothing more than plugging a cord into a regular 110 volt A.C. outlet. When an operator has copy to transmit he telephones the operator at the receiving station, and when the latter is ready to begin receiving both operators place their telephone handsets into the phone couplers. The transmission link is thereby established and the transreceiving automatically begins.

The report* on this experiment noted that a full 8½ x 11" page may be transmitted in less than six minutes. Scanning proceeds at the rate of 180 lines per minute at 96 lines per inch, so that a page with five inches (vertical measurement) of typescript, for example, may be transmitted in less than three minutes.

The report continued, "Copies are received on ordinary paper, the facsimile being produced by pressure of a stylus through carbon paper. Since stylus pressure varies with the intensity of the signal produced by the scanner in response to various degrees of darkness in the image, halftones are reproduced fairly well". It was found further that "An average total elapsed time of four hours for completion of requests can be readily achieved. At 1,000 pages per month, an approximate volume for use for this system, operating cost is $4.60 per 10-page transmission, excluding any telephone line costs. Total costs for such a transaction, including all staff time and a $3.00 telephone line charge average about $9.85," or nearly $1.00 per page. There was considerable variation in the quality of the reproductions, due to a number of factors. According to the report, "Reliability of the equipment was poor, with inconsistent copy quality, and frequent breakdown."

The telefacsimile equipment is leased rather than sold by the Xerox Corporation. The three basic elements are the scanner (transmitter), the transmission link, and the printer (receiver). The minimum charge is $550 per month for the scanner and $650 per month for the printer, plus a minimum of $700 for the transmission link.

A news release from the Xerox Corporation, dated May 23, 1967, reports on a further experiment in the University of California, this one linking the Berkeley and Davis campuses, about 90 miles apart. As reported, the system works as follows:

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*Morehouse, H. G. *Telefacsimile Service Between Libraries With the Xerox Magnavox Copier.* Reno, Nevada: University of Nevada Library, December 20, 1966. 54 1. Processed.

Faculty members on the Davis campus made their requests by telephone to librarians at Berkeley, who researched the topic and brought out appropriate journals or other publications. Pages were copied on a Xerox 914 copier, fed into an LDX Scanner (or transmitter) and reproduced at the Davis campus at a speed of 35 seconds per page by the LDX Printer (or receiver). A microwave transmission system, provided by Pacific Telephone and Telegraph, links the two facsimile units. In one of many transactions, more than 20 pages from an obscure journal located at Berkeley, were copied and flashed to the Davis campus—all in less than 30 minutes.

Though not all time factors were taken into account in this experiment, it appears that the rate of transmission of material is being speeded up considerably over earlier efforts.

Recently initiated in New York State is a network of institutions, beginning with five libraries, to send and receive facsimiles of documents and pages of books to libraries anywhere in the state. The original group consists of the New York State Library, New York Public Library, Cornell University, Buffalo and Erie County Public Library, and Rochester Public Library. The number will expand later to 25. Scholars only will be served and no one person will be supplied with more than 12 pages of material. After material is located, it is placed in the facsimile transmission machine and sent to the system link nearest the scholar. The project is still highly experimental and the quality of transmitted copies is reported unsatisfactory.

The *Wall Street Journal* on March 22, 1967, reported that "Students at Penn State's King of Prussia branch can obtain reproductions from technical publications in the main campus library at University Park, 92 miles away. A long-distance facsimile transmission system, similar to those used to carry wire-service news photos, delivers the technical materials minutes after they are requested."

Evidently experimentation in this area is in progress in various locations, and the method holds great promise for the future. At the present stage of development, however, the equipment is slow, very expensive, and generally inefficient for any except limited use.

Prospects for the Future

The rate of technological change is so rapid that predictions for the future are risky. The prospects for further progress in information control appear especially bright, however, in such fields as science and engineering, where the research worker is most commonly seeking factual and quantitative data.

The wave of the future was recently envisioned by the director of Project Intrex at the Massachusetts Institute of Technology:*

> One can visualize a procedure in which the user manipulates a keyboard to call up an item from the library's holdings. Images of successive pages of the selected items may be presented for brief examination on an optical screen, and the mere push of a button will result in prompt delivery of duplicates of desired pages.
>
> On-demand copy service of this type can be diffused to all parts of an academic community so that no person will have to move far from his office or his laboratory in order to reach a local terminal of the library network. There the user will find an electronic display console on which he can consult the library system's union catalog. For deeper bibliographic searching, a teletypewriter keyboard will give him direct access to a central computer facility with a large store of indexed information on journal and report literature . . . Libraries will be interconnected to form regional and national networks, so that the resources instantly available to each user will be enormously widened.

It should be stressed that the "glittering possibilities" described by Professor Overhage are still dreams, though he assures us that they are all within reach of today's technology. The expenditures of large sums of money, a vast amount of experimentation, and better organization of library resources will be required to make real such visions of a bright future.

Systems and Networks

Experts in the field of library automation emphasize the importance of systems and networks. Ralph H. Parker and Frederick G. Kilgour, for example, state: "computerization of present library procedures on a piece-by-piece basis cannot be justified, for it is now possible to organize a library system, or a regional group of libraries, into one total information system by using computers and associated equipment. In such a system, individual processes become an integral part of the whole."**

Dr. Burton W. Adkinson of the National Science Foundation, quoted earlier, notes that "there is a promise in automation that often goes unrecognized. That promise is the potential for exchanging and sharing the housekeeping records . . . Any plans that involve library automation had better show careful consideration of the possibilities and implications

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*Overhage, Carl F. J. "Science Libraries: Prospects and Problems." *Science*, 155 (February 17, 1967), 802-06.

**Report to the Committee of Librarians of the Ohio College Association. 1967. Unpublished.

of connecting any one computer-based, record-keeping system with others that are engaged in parallel efforts. This is the more true as plans for national systems with emphasis on automation emerge. Any one system proposal that ignores the problem of ultimately looking into ultimate national configurations may be looked at as potentially schismatic."*

Another authoritative voice, Joseph Becker, now a staff member of EDUCOM (Interuniversity Communications Council), points out "The fact that there are no geographic limits to the library network idea is particularly attractive." W. J. Bray, Deputy Director of Research of the British Government Post Office, predicts that communication satellites, such as EARLY BIRD, will permit intercontinental computer-to-computer "conversations," which eventually will facilitate the sharing of information resources among the libraries of the world. The network principle would permit, for example, an alliance among the libraries of the different provinces of Canada and between Canada and the United States.

Summary

The greatest advantage of automated systems for libraries is in the freeing of librarians to do more strictly professional tasks. Machines can do repetitive jobs far better than humans. The machine does not become tired, forgetful, or bored.

The administrator who is expecting automation to reduce the costs of library operations is probably due for a disappointment. Most studies of automated library procedures reveal that the cost is usually no less than a manual operation, and in fact may be more. But the job may get done more efficiently and expeditiously, and a greater variety of services made available.

Some enthusiasts for automation get carried away with the idea of a limitless future. Despite Marshall McLuhan's belief that the book is obsolescent and is having, in Jesse Shera's phrase, "its last big splurge like the dinosaurs before their extinction," the book is certain to remain with us. A common-sense view of the matter is well expressed in a statement by Frederick H. Wagman, Director, University of Michigan Library:

> Fascination with the computer has led to shortsighted depreciation by some theorists of the book and its very great virtues—its compactness, portability, ease of use, and tremendous capacity for the storage of information . . . The fact is that the computer and the book have

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*Adkinson, op. cit. p. 64.

> quite different uses which are not in conflict. The assumption of an either/or situation is misleading nonsense. The computer can be, and is, extremely useful for the purpose of storing, updating, and manipulating alpha-numeric data in a control place when immediate access to that data from varied and remote locations is necessary . . . where up-to-dateness of information is not crucial, or the need for speed is marginal, we shall continue to resort to the printed book even for the sort of information recorded in handbooks and directories.*

A device on which many hopes are pinned, telefacsimile transmission systems, is at present slow and costly, designed for single-sheet copy, not for reproduction from bound books or journals, and a phenomenally large amount of text must be transmitted to justify the expense. Further research and experimentation will undoubtedly lead to improvements in these mechanisms.

The concept of a national or international library network is perhaps the most exciting development that data processing has opened up, offering new approaches to the problem of gathering and retrieving essential information.

The extensive activity currently going on in Canadian libraries and elsewhere is largely unco-ordinated. There is duplication of experiments, of systems designs, and of programming. A first essential for any library planning an automation programme is to communicate—find out what is going on elsewhere, learn from the experience of others, capitalize on the experience of others by visiting libraries which have been working with automated processes, and pass on information of possible value to others. Any library whose operating procedures can potentially be made more efficient and effective should not hesitate to engage in experimentation, even if mistakes are made. In that direction lies progress.

Finally, the word "automation" has become attractive, fashionable, and glamorous, a kind of status symbol, equated with progress and modernity. It should constantly be kept in mind, however, that automation is but a means to an end—the end being the provision of better services to library users. The current situation and future outlook are soundly reviewed in a statement recently presented by the Association of Research Libraries to the U.S. National Advisory Commission on Libraries:

> Many people have done a disservice to the entire research community by oversimplifying the library problem, usually in the form of fanciful solutions involving computer technology. As a result of effective but

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*Wagman, F. H. "Federal Aid for Libraries — Some Common Sense About the Future." Allerton Park Institute, *Federal Legislation for Libraries*. Champaign, Ill.: Illini Union Bookstore, 1967. p. 91-92.

limited applications already achieved, librarians are convinced that the computer will play an increasing role in research libraries; it appears equally clear that this role initially and for many years will be one of rationalizing, integrating, and speeding the response of the bibliographical apparatus. The intellectual content of large, encyclopedic research libraries is not likely to be reducible to a small black box or a desk drawer for many years, if ever, and therefore the traditional book will continue to be a reality with which we must deal.*

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*For librarians who wish to explore in depth the field of library automation, the following reference is recommended: McCune, Lois C. and Salmon, Stephen R. "Bibliography of Library Automation." *ALA Bulletin*, 61 (June 1967), 674-75, 678-84.

9. Library Co-operation and Interrelationships

For several generations library leaders have been urging various types of joint effort. The potentialities of library co-operation are widely recognized and for certain fields accomplishments have been notable.

Research libraries in Canada and the United States are struggling with the problems created by their exponential growth rate, which in itself reflects the proliferation of published material the world over. One of the consequences is that the doctrine and practice of self-sufficiency are being superseded by the interuniversity sharing of library resources. Since no library can hope to acquire everything, past and current, produced by the world's presses, the advantages of combining resources are obvious, particularly as rapid methods of reproduction of material and transmittal of information improve.

The typical scholar, it should be noted, is not usually an enthusiastic supporter of the concept of shared library resources. He wants his books, especially those frequently used, close at hand and not off in some remote location. On the other hand, the scholar whose own university library is poorly stocked may be a warm advocate of pooled resources.

It has long been recognized by librarians that substantial economies could result in library operation through a division of fields among universities and a corresponding specialization of subject coverage in university libraries. Why, for example, offer multiple research and teaching programmes and extensively-developed library collections in Icelandic literature, Sanskrit studies, Finno-Ugric languages, and similar esoteric areas? Great universities are generally reluctant, however, to circumscribe their activities or to relinquish any on-going programmes. Thus, institutional rivalry and the traditional ideal of self-sufficiency have retarded specialization of fields, though not necessarily the sharing of library resources. Individual research libraries are therefore likely to continue their present growth rate.

Co-operation is not, of course, a panacea for all library or educational problems. An institution will be stimulated and strengthened by co-operation with its neighbors, but such activities cannot be regarded as a substitute for generous local support. A certain danger exists, for example, that if a university or college becomes hard pressed financially, temporary outside assistance will be viewed as replacing the institution's own long-range provisions for its library's growth.

Students of library co-operation have generally concluded that the most favorable opportunities for joint effort are in specialized subjects and in little-used types of material. A reasonable degree of duplication must go on among libraries. Every library necessarily procures for its own collections much-used reference works, general-interest periodicals, books needed for undergraduate reserve reading, and other titles in frequent demand, without regard to their availability elsewhere. Otherwise, it is not providing satisfactory service to its clientele. Even at the graduate and research level, considerable duplication will be necessary.

It should be strongly emphasized that libraries do not operate in a vacuum. They are service agencies and must be guided by the teaching and research programmes of their institutions. If two neighboring universities decide to offer graduate work in Islamic studies, for instance, a duplication of library resources will follow as a matter of course. Rationalization of graduate studies on a provincial and regional basis is a pre-condition for the rationalization of library resources.

Place of National Libraries

A sound programme of library co-operation and co-ordination in Canada requires full participation and leadership by the National Library, the National Science Library, and other federal library agencies. The first two, in particular, are in a peculiarly advantageous position, because of their prestige and the wealth of their own resources to help formulate and to steer a comprehensive national plan of library co-operation. Until now, both have been severely handicapped by inadequate buildings; that situation has already been relieved for the National Library and is approaching a solution for the National Science Library.

In his *Resources of Canadian University Libraries for Research in the Humanities and Social Sciences,* Edwin E. Williams recommended the establishment in the National Library of an Office of Canadian Library Resources, charged with providing the following services:

1. Assemble and maintain information concerning research library collections in Canadian university libraries.
2. Encourage institutions to build up strong collections.
3. Compete on behalf of the universities in the second-hand book market.

4. If authorized to do so, negotiate major purchases.
5. Represent libraries in respect to vast micro-reproduction projects.
6. Suggest purchases to libraries.
7. Publish a current bulletin reporting major collection plans and significant acquisitions.

No action has yet been taken on this recommendation, in part perhaps because of the National Library's space problem. Implementation of the proposal is an essential step toward providing the kind of leadership for research libraries which should come from the National Library.

The National Library in Ottawa came into existence in 1953. Earlier, in 1950, the Canadian Bibliographic Centre was established, located in the Public Archives Records Centre, where it began the creation of a national union catalogue. The Centre also initiated in 1950 publication of *Canadiana,* a monthly list of works published in Canada and by Canadians, in three parts: a subject list of trade and institutional publications, a list of publications of the Canadian government, and a list of publications of the governments of the 10 provinces. The Bibliographic Centre became part of the National Library in 1953. The National Library is also a copyright depository for Canada. Its present holdings total about 500,000 volumes.

When the National Library was created, a joint appointment of National Librarian and Dominion Archivist was given to Dr. W. Kaye Lamb, and the two offices have continued to be held by the same person. A number of common services have been developed to serve both institutions, but each has preserved its identity. The *Report* of the Royal Commission on Government Organization (1962-63) comments on this arrangement as follows:

> The last ten years have seen an unprecedented development in both the archival and library fields. With the emergence of the National Library as a full-fledged national institution, with its own staff and resources, and with the assurance of proper physical facilities, the offices of Dominion Archivist and National Librarian should no longer be the responsibility of a single person.

The National Science Library of Canada had its beginnings in 1924, since when its collections have grown to over 600,000 volumes. Concurrently, the Library's services have expanded as librarians, scientists, engineers, and other have turned to it for publications and information not available elsewhere in Canada. By agreement, there is a division of fields of collecting with the National Library; the National Library assumes responsibility for the humanities and social sciences, the National Science Library for science and technology.

The National Library's collecting responsibilities need to be more specifically defined. Its current book budget is reported to be only $240,000. Far larger appropriations will be required if the National Library of Canada is to develop into one of the important national libraries of the world. A minimum book budget of $1,000,000 per year is needed.

The National Science Library has two principal functions. It serves the specific requirements of the National Research Council's scientific and engineering staff and it is also a national library serving the entire scientific and engineering communities of Canada. To serve these highly important roles, the National Science Library aims at comprehensive coverage of the world's output of scientific and technical literature and it is constantly developing new techniques to ensure that Canadian scientists, engineers, and others can obtain, with a minimum of delay, the publications or information required in their researches.

The new building under construction for the National Science Library, capable of housing 2,000,000 volumes, will enable the Library to improve, strengthen, and expand its present services. The building will house the National Library Resources Centre for the Health Sciences, to include literature resources for and information services to the medical and health sciences. This development will meet the expressed need for a national medical library to supplement the National Science Library. Also in the planning stage is a network of regional medical libraries, to decentralize and to expedite service to the medical profession. Closely related is a plan sponsored by the Association of Canadian Medical Colleges and the Medical Libraries Committee for specialization of fields among medical libraries.

A recent development in the national library field is the plan by the provincial government of Quebec to establish the Bibliothèque Saint-Sulpice in Montreal as a library for French Canada. Saint-Sulpice was founded in 1844. At one time it served the Université de Montréal, but since their separation has functioned as a public library. The Library's collections are chiefly in the humanities and social sciences, excluding science and technology, library science, law, and education. The main strength is in French language material from Canada, for which completeness is the aim, both retrospectively and currently. Also collected are publications relating to French Canada published outside Quebec and all Quebec province publications in all languages. Periodicals and newspapers are included. If legislation pending in the Quebec legislature is approved, St-Sulpice will become a legal depository for Quebec publications, issue a periodical bibliography of imprints appearing in the province, and maintain a union catalogue of French Canadiana. It is expected that the union catalogue will locate unusual material in little known collections.

It is the view of the study team that development of the Bibliothèque Saint-Sulpice will not relieve the National Library of Canada of its responsibility for gathering and maintaining a national collection of books and other materials for all of Canada, for the compilation and maintenance of a national union catalogue in which the holdings of libraries throughout Canada are listed; for the compilation and publication of a national bibliography of books produced in Canada, and to perform such other services as may legitimately be expected of a true national library. Any assistance that Saint-Sulpice or other libraries can provide in strengthening, supplementing, and complementing these services will benefit all of Canada, including French Canada.

The *Report* of the Royal Commission on Government Organization concludes its recommendations on national libraries with the following very pertinent statement:

> Federal libraries render essential service in the conduct of the nation's business. Many of them, as noted, form part of our national heritage, and the Canadian public benefits to a marked degree from their resources. Provision for the continued orderly growth and development of the National Library will create a focus for these services and an instrument for effecting economies of operation and improved efficiency in the varied departmental libraries of the Federal Government.

Types of Library Co-operation

Library co-operation takes many forms. Among its manifestations are union catalogues, union lists, bibliographical centres, storage centres for little-used materials, specialization of fields among libraries, microreproduction and photoreproduction projects, national and regional planning, abstracting and indexing, exchanges of publications, evaluative studies of resources for research and study, and centralized acquisition and cataloguing. One of the oldest and most prevalent types, interlibrary loans, was discussed in the chapter on "Readers' Services and Use," and perhaps the newest in the chapter on "Library Automation and Mechanization." A review of current activities in Canada under some of these headings belongs here.

National Planning

Planning for college and university libraries in Canada as a whole has been the responsibility chiefly of the Canadian Association of College and University Libraries, and it is the obvious intention of the Association to continue its strong leadership in the field. Examples of its activities are its published study of the cost of academic library services in Canada, its guide to university library standards, its report on position classifications and salary scales in academic libraries, its investigation of the status of library education, and its initiation and sponsorship of the present comprehensive study of resources of Canadian academic and research libraries.

Regional Planning

The regional approach to the study and development of library resources has proved fruitful. Because of the wide geographical sweep of Canada, the uneven distribution of library resources, and the varying characteristics of the principal regions, co-operative programmes can frequently be managed more effectively on a regional than on a national basis.

Investigations of greater depth than it was feasible for the study team to undertake could shed light on problems peculiarly regional in nature. For example, what are some of the background reasons for striking inequalities in the distribution of Canadian library resources? To what extent do library holdings of different regions duplicate each other and to what degree are they distinctive? What types of library materials, e.g., newspapers or local and provincial govenment publications, most readily lend themselves to regional rather than national projects for co-operative collecting? At what stage in the growth of the libraries of a region do the advantages of co-operative storage appear worthy of exploration? Since inadequate financial support is usually the most pressing problem in underdeveloped areas of the country, what sources of funds may be available for stronger support, and in what ways might any additional funds be used for the greater benefit of all libraries in a region?

In an address reported in the *Globe and Mail* (March 29, 1967) Dr. Roger Gaudry, Vice-Chairman of the Science Council of Canada and Rector of the Université de Montréal, asserted that co-ordination of the scientific development of Canadian universities must be done on a regional as well as national scale. For this purpose, a region is not equated with a province. Dr. Gaudry proposed four regions for university co-ordination: the English-speaking Maritime Provinces, French-speaking Eastern Canada, English-speaking Central Canada, the Prairies and British Columbia.

The groups most actively concerned with library co-operation actually are operating within the regional lines defined by Dr. Gaudry. An organization of the Librarians of Western Canadian Universities (British Columbia, Alberta, Manitoba, and Saskatchewan) met for discussion and planning purposes at Vancouver on February 13-14, 1967. The Ontario Council of University Librarians (successor to the Committee on Co-ordination of Academic Library Services) held its first meeting on January 19, 1967. In the Maritimes, the Association of Atlantic Universities has a Library Committee which is meeting twice yearly to consider matters of library co-operation. No formal organization of French Canadian university librarians was reported, though the Association Canadienne des Bibliothécaires de Langue Française performs some of the same functions, through its section called "Bibliothèques universitaires, gouvernementales, et spécialisées." The Quebec Council of University Rectors is concerning itself with proposals to rationalize library collections.

The meeting of the Librarians of Western Canadian Universities at the University of British Columbia, Vancouver, February 13-14, 1967, explored ways and means of co-operating in the development of collections and in sharing collections through the rapid transfer of library materials and information. The principal recommendation of the group was that a joint conference be held on the rationalization of graduate studies, to include chairmen of provincial University Commissions, Presidents, Graduate Deans, and Chief Librarians. Without understandings in this area, the librarians agreed, library co-operation would be held back. The librarians discussed at length methods of expediting the transmission of library materials. At its present stage of development, electronic transmission apparatus, it was decided, is too expensive and too inefficient to use. Conventional interlibrary loan procedures, therefore, remain the most practical means for libraries to share their resources. Strict adherence to the ACRL Interlibrary Loan Code was urged for such transactions.

The Ontario Council of University Librarians held its first meeting on the McMaster University campus, January 19, 1967. It is planned to have at least two meetings a year with the Council on Graduate Studies, the two Councils constituting a joint advisory committee of the whole to deal with matters of common concern. The specific responsibilities of the joint committee, it was stated, shall be:

a. To ensure the discharge of responsibilities assumed by institutions in accepting the allocation of special areas of research development, and of duties with respect to bibliographic and special reader services.

b. To advise the Council of University Librarians on the operation of the bibliographic centre and special reader services.

c. To advise the Council of Graduate Studies on the operation of appraisal procedures as they affect libraries.

The centre referred to in the second item is to be the Bibliographic Centre of the University Libraries of Ontario, to be housed in the new University of Toronto Library building. The Bibliographic Centre will be under the administration of the Ontario Council of University Librarians. The Toronto building plan includes 600 special study spaces and related services, in which professors and graduate students from other Ontario universities will be given priority. It is anticipated that the Bibliographic Centre will supply information basic to all the co-operative planning and use of library collections in the universities and will connect with other resources outside the universities or outside Ontario. A plan is pending for the division of fields among the university libraries of Ontario and for an inter-campus delivery system for interlibrary loans, utilizing station wagons on a regular schedule.

The appraisal procedures referred to in the third type of responsibility of the joint committee concerns a recently-established plan whereby the presidents and graduate deans of Ontario universities agreed that all new graduate programmes must be approved, if they are to qualify for government assistance. The accreditation plan is administered by the graduate deans. An important element in any new field proposed is library resources. Unless the librarian of the institution where the curriculum is to be offered certifies that library resources in that area are adequate, the programme is not approved. There is a possibility that the appraisal of library collections may be retroactive for courses of study already in existence.

The Ontario Council of University Librarians has several other projects under consideration. A common user or pass card is to be issued to faculty members and graduate students entitling them to controlled use of any or all of the university libraries of Ontario. The success of a province-wide programme of library co-operation will be gauged in large part by the accessibility of collections and the elimination of unnecessary formalities. One proposal is the creation at the Centre of a union catalogue in machine-readable form of the holdings of the Ontario university libraries, primarily for acquisitions, to serve as a guide to collection development. There is scarcely any question about the usefulness of such an instrument. A thorough re-examination of the plan is recommended, however, for the following reasons: (1) though in a different form, the information would be largely, if not entirely, duplicated in the National Union Catalogue; (2) the creation of a machine-readable union catalogue should be a national, not a provincial, responsibility, to serve all of Canada and comprehensive of the country's research collections; furthermore, the logical location is at Ottawa in the National Library; (3) the establishment and maintenance of such a catalogue would constitute a heavy burden of expense on a single province.

It has been the American experience that it is more efficient and economical to concentrate union catalogue information for the entire United States in the National Union Catalog at the Library of Congress, instead of attempting to operate local, state, or regional union catalogues. A complete record of research-type material held by libraries throughout Canada in the Union Catalogue at Ottawa, accompanied by the most modern communication devices, would undoubtedly be of the greatest service to scholars, students, and other library users. The goal should be to perfect the present Union Catalogue, not to duplicate or to replace it.

The developments in progress in Ontario are in general harmony with the Spinks Commission's recommendations.* In Dr. Spinks' words:

> It is recommended that an Ontario University Library [System] be established. Under this scheme the research libraries of all the provincially supported universities would be designated as provincial resources and be available to all faculty and qualified graduate students in the province. The major centre would be the University of Toronto Library which would be suitably expanded to take care of these new responsibilities.

According to views expressed by President Claude T. Bissell of the University of Toronto in an interview with the library study team, the developments at Toronto should relate to both provincial and national programmes, with an integrated, not centralized, library system for Ontario. The educators, librarians, and government officials of Ontario recognize that it may not be feasible to bring up to a comprehensive level all 14 of the university libraries supported by the province. Close co-operation is required, therefore, to make all resources fully available.

Different problems are posed by libraries of the Maritime universities. The total resources of the 12 university libraries in the Maritime Provinces, as of July 1, 1966, totaled 1,093,861 volumes, less than one-fourth of those available in the 14 Ontario university libraries, which reported 4,533,036 volumes on the same date. Is a co-operative programme limited to the Maritimes desirable and worthwhile? The question is being

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**Report of the Commission to Study the Development of Graduate Programmes in Ontario Universities*. Toronto, 1966. p. 55-62.

asked seriously by some of the Maritime university librarians. To them, it would appear at this stage, it would be a case of sharing poverty, not wealth. The choice is between a national and a regional point of view. There is an inclination in the Maritimes to look outward, toward Montreal, Quebec, Ottawa, and Toronto, in particular, rather than inward, toward other institutions with limited resources like themselves. Even under the new formula for federal equalization payments, the governments of New Brunswick, Newfoundland, Prince Edward Island, and Nova Scotia will lack funds to finance all their universities, including their libraries, as generously as would be required to raise their standards up to those of institutions in the wealthier provinces. An obvious answer is for them to concentrate financial support in the institutions where graduate and professional study is well established and recognized.

The dilemma is analogous to that of the new universities. Certainly, Simon Fraser University Library would be seriously handicapped if its faculty and graduate students were not permitted to draw freely upon the resources of the University of British Columbia Libraries through a daily delivery service. In similar fashion, Calgary has shared the collections of the University of Alberta, and York University the University of Toronto's rich holdings.

Communication Problems

The vast distances in Canada and the wide distribution of institutions of higher education complicate the matter of communication. Until telefacsimile transmission is perfected, telephone, telegraph, Telex, air mail, and other devices must be utilized to speed up interlibrary loans and the interchange of information. A popular form of installation is Telex. According to a directory* just issued, there are 18 Telex stations in university libraries, 9 public libraries, and 8 special (including governmental) libraries, a total of 35 installations. The academic libraries listed with Telex equipment are these:

UNIVERSITY OF ALBERTA
UNIVERSITY OF BRITISH COLUMBIA
BROCK UNIVERSITY
UNIVERSITY OF CALGARY
CARLETON UNIVERSITY
UNIVERSITY OF GUELPH
LAKEHEAD UNIVERSITY
LAURENTIAN UNIVERSITY

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*Melvin, D. S., comp. *Canadian Library Telecommunications Network Directory*. Toronto: Toronto Public Library, 1967. 27p.

UNIVERSITÉ LAVAL
MCMASTER UNIVERSITY
UNIVERSITY OF OTTAWA
QUEEN'S UNIVERSITY
SIMON FRASER UNIVERSITY
UNIVERSITY OF TORONTO
UNIVERSITY OF VICTORIA
UNIVERSITY OF WATERLOO
UNIVERSITY OF WESTERN ONTARIO
UNIVERSITY OF WINDSOR

The distribution of Telex stations in universities is uneven: 12 are in Ontario, two in Alberta, three in British Columbia, and one in Quebec. There are none listed for the remaining six provinces. Additional installations are needed to create a true national network. The librarians should also realize the full potentialities of the device, e.g., using Telex both to send and to answer inquiries. Among the 17 Telex stations in public and special libraries, all except two (one each in Prince Edward Island and Quebec) are in Ontario.

Photo-Duplication Facilities

The sharing of resources is greatly expedited, of course, if libraries have good photo-duplication facilities available. On this matter, the university libraries reported equipment on hand as follows:

ACADIA: Xerox.
ALBERTA: 3 Xerox machines. Microfilming can be done on campus, but usually sent out to commercial firm.
BISHOP'S: Xerox, Savin Sahara 200.
BRANDON: Photocopier.
BRITISH COLUMBIA: 6 photocopy machines.
BROCK: Xerox.
CALGARY: Xerox.
CARLETON: Docustat, Xerox, etc.
DALHOUSIE: Xerox and Dennison copiers.
GUELPH: Xerox, 3M 209
LAKEHEAD: Xerox, 3M copier, Recordak microfilm printer.
LAURENTIAN: Xerox.
LAVAL: 4 Xerox machines, Recordak microfilm reader.
MCGILL: Multilith, Photo-offset, Xerox, Dennison, Docustat, microfilming, blueprinting.
MCMASTER: Xerox, microfilm.
MANITOBA: Xerox.

Montréal: Photocopying, Docustat.
Mount Allison: Equipment available, not specified.
Mount Saint Vincent: Xerox.
New Brunswick: Xerox.
Newfoundland: Xerox, Recordak Reader-Printer, Recordak Microfilmer, Itek plate master.
Notre Dame: SCM photo-copier, 3M book copier.
Nova Scotia Tech: Xerox and microfilm.
Ottawa: Xerox, Docustat.
Prince of Wales: Xerox.
Queen's: Xerox (914 and 2400), microfilm.
St. Francis Xavier: Xerox, A. B. Dick.
St. Mary's: Xerox.
Saskatchewan: Xerox.
Saskatchewan (Regina): Xerox, Recordak Magnaprint Reader.
Simon Fraser: Xerox, Recordak microfilm camera.
Sir George Williams: Docustat, Dennison, Xerox.
Toronto: Xerox, microfilm, slides, enlargements, reader-printer.
Trent: Xerox.
Victoria: Xerox, reader-printer.
Waterloo: Xerox.
Western Ontario: Xerox, microfilm, reader-printer.
Windsor: Equipment available, not specified.
York: Xerox.

Union Catalogues and Union Lists

Any programme of national bibliographical control must rest primarily on union catalogues, union lists, and national bibliographies. For Canada, the last is adequately provided in the National Library's annual cumulation *Canadiana,* previously referred to. The principal union catalogue is also maintained by the National Library of Canada. According to the third edition of *Symbols Used in the Union Catalogue* (1967), symbols have been assigned to more than 650 libraries, covering every province, though it is stated, "the fact that a library is included in this list does not necessarily mean that its holdings are included in the Union Catalogue. For some, symbols have been established because it is hoped to add the record of their collections to the Union Catalogue in the future."

The Union Catalogue at Ottawa, it is reported, now contains a record of more than 9,000,000 individual titles, adding up to 10,000,000 volumes, and over 2,000 new entries are made each day. All government libraries and many special libraries are covered. The staff of the Union Catalogue supplies about 50,000 locations a year to requesting libraries, either by mail or Telex. Several factors have retarded the growth and usefulness of the Catalogue. Until 1967, there was an acute shortage of space, the operation was somewhat understaffed, and there were filing arrears. Nevertheless, service continued to be reasonably prompt. The generous space provided in its new building should enable the Library to correct any past deficiencies.

A special study should be undertaken by the National Library to determine what important libraries or collections are unrepresented or inadequately represented in the National Library Catalogue. A systematic programme should then be undertaken to add entries for these holdings to the Catalogue, probably by some rapid method of photographic reproduction.

A good number of Canadian libraries are also represented, usually for Canadiana and special collections, in the National Union Catalog at the Library of Congress. The latest published volume of this catalogue lists 111 Canadian libraries as contributors, 40 of them institutions of higher education. The publication of the National Union Catalog recently announced will be a major bibliographical event; projected over a 10-year period, the catalogue will run to 610 volumes containing over 16,000,000 entries from more than 2,000 libraries.

Two other Canadian union catalogues should be noted. The first is the Metropolitan Bibliographic Centre in the Toronto Public Library. The Centre's union catalogue contains 700,000 author-title entries from about 70 libraries, non-fiction only. The institutions covered are predominantly public libraries and special libraries, though there are a few specialized or technical educational institutions, such as the Ontario College of Art, Ontario College of Education, Royal Canadian Military Institute, and the Ryerson Polytechnical Institute.

Another union catalogue is in the Provincial Library of Nova Scotia, Halifax, including all Nova Scotian libraries.

A kind of union catalogue is represented by the Ontario New Universities Library Project, which produced in book form by computer, under authors, titles, and subjects, a union catalogue of 35,000 titles (45,000 volumes) of books acquired by five new colleges in Ontario.

Canadian libraries are participating in a number of major union lists of serials. Since 1927 the principal libraries have had their holdings covered by the *Union List of Serials in Libraries of the United States and Canada,* the third edition of which was issued in 1965. The last edition includes 64 Canadian libraries, of which 28 are associated with colleges and universities. A continuation of this work is *New Serial Titles, a Union List of Serials Commencing Publication After December 31, 1949,* issued by the Library of Congress; currently 130 Canadian libraries are contributing to this monthly publication (with annual, five-year, and 10-year cumulations).

Another list of first-rate importance is the *Union List of Scientific Serials in Canadian Libraries* (Ottawa: National Research Council of Canada, 1957. 805 p.), covering 140 libraries. A Supplement was issued in 1960. A second edition, computer produced, and published in 1967 by the National Science Library, lists 38,000 titles in science, technology, and medicine for 198 libraries. Any library in Canada can obtain a print-out record of its own holdings from the master file.

A complementary union list, covering the humanities and social sciences, is in preparation by the National Library of Canada.

Co-operative Acquisitions

Examples of co-operative agreements for acquisition of material among the libraries in Canada apparently are not numerous. One successful instance is the co-operative programme established in Montreal by McGill, Sir George Williams, and Loyola for dividing responsibility among themselves for acquiring materials in the field of African studies. During the current year, approximately $10,000 has been spent in this area by the libraries; the basic principle of the agreement is a geographical division of the African continent.

Participation by Canadian libraries in several international co-operative projects—National Union Catalog in the Library of Congress, *Union List of Serials in Libraries of the United States and Canada,* and *New Serial Titles* — has been mentioned above. The University of Toronto Libraries are active on several other fronts: (1) The Farmington Plan, a co-operative acquisition plan sponsored by the Association of Research Libraries; (2) The Center for Research Libraries, with headquarters in Chicago, a co-operative acquisition-storage operation; the Association of Research Libraries' African Microfilm Project, Foreign Gazette Project, and Foreign Newspaper Project; and the Library of Congress' MARC project, an experiment in the use of machine-readable catalogue cards. The University of British Columbia has also recently become a member of the Center for Research Libraries and for a number of years has belonged to the Pacific Northwest Bibliographic Center at Seattle, which maintains a regional union catalogue, provides various bibliographic services, and is concerned in general with the sharing of library resources.

Farmington Plan for Canada

The matter of co-operative acquisitions again poses for Canadian university and research libraries the desirability and feasibility of a Farmington Plan-type of programme for Canada. The Farmington Plan was inaugurated 20 years ago by some 60 American libraries for the purpose of bringing to the United States at least one copy of every new foreign publication of potential research value, to list all acquisitions in the National Union Catalog, and to make them available by interlibrary loan or photographic reproduction. The division among the libraries has been in part by subject and in part by geographical area. Though certain aspects have been criticized, the Farmington Plan is generally considered a success and its operations are continuing.

In his 1962 report on Canadian university libraries, Edwin E. Williams, a prime mover in the Farmington Plan for some years, did not recommend a Farmington Plan for Canada for two reasons: Canadian libraries benefit from the American project and should raise the general level of their research collections, and, second, "a more decisive consideration is the relative weakness and immaturity of Canadian libraries."

During the five years since the Williams report was written, a good number of Canadian university and other research libraries have corrected some of their serious weaknesses and have gone far toward reaching a state of maturity. It would be appropriate, therefore, to re-open the question of a Farmington Plan for Canada. Such libraries as British Columbia, Laval, McGill, and Toronto already are carrying on extensive foreign acquisition programmes, and it may be practicable to co-ordinate these and others into a national scheme. Possibly a plan less than world-wide in scope should be considered, e.g., Western Europe, Latin America, and selected areas elsewhere. Lacking such a rational plan, the libraries may duplicate unnecessarily while omitting coverage of important materials.

Co-operative Processing

The high cost of library technical operations—acquisitions, binding, cataloguing, and classification—has been a matter of primary concern to librarians for a number of years. The most hopeful recent development is the Library of Congress-sponsored programme to attack the problem on an international basis, as discussed in the chapter on "Technical Services in Libraries." A network of national and other libraries is being organized to catalogue the world's literature co-operatively. A number of Canadian libraries are in the co-operating group, among them the National Library, British Columbia, McGill, Queen's, and Waterloo.

A regional plan of interest is the co-operative printing centre for catalogue cards for 12 Maritime university libraries at St. Mary's University Library in Halifax. The same group of libraries has centralized microfilm services in the Nova Scotia Technical Library and is participating in a union list of serials in preparation at Dalhousie University Library.

Sharing Use of Resources

Virtually all important university and research libraries are hospitable to visiting scholars and students. They are also inclined to make their collections freely available, at least for use within the library building, to citizens of the communities in which they are located. A few examples will illustrate the prevalence of this philosophy in Canada. McGill extends library privileges to faculty members of all universities in Montreal; McMaster serves the faculties of Hamilton Institute of Technology and Hamilton Teachers College; Alberta serves the medical profession of the province, as does Manitoba; Manitoba also maintains an extension division in the Library to serve individuals and schools in the province lacking access to public libraries; Mount Allison provides library service to correspondence students, alumni, and scholars in the area (especially the Université de Moncton faculty); the University of Toronto permits any person who observes building rules to read in the library, and makes available for a $5.00 deposit an extramural membership for residents of the metropolitan area (except students working for credit). Almost without exception, the university libraries of the country maintain good photographic services for the reproduction of material needed by scholars, students, and others.

Institutional Interrelationships

The availability of other libraries in the community or in the region can have an important impact on a library's development and services. Such resources may reduce the need for duplication, facilitate interinstitutional arrangements for specialization of collections and interlibrary loans, and supplement in general an individual library's holdings. One of the questions asked by the study team, therefore, was: "What other research libraries or collections in the immediate area are accessible to members of the university or college community?" Following is a summary of replies:

ACADIA: None.

ALBERTA: Edmonton Public Library (315,000 volumes); Alberta Legislative Library (50,000 volumes; good for government and political material and also Alberta newspapers and historical research materials).

Bishop's: Faculty and students occasionally use Université de Sherbrooke Library.

Brandon: Closest research libraries are University of Manitoba and Manitoba Provincial Library (133 miles).

British Columbia: Vancouver Public Library and Simon Fraser University Library.

Brock: McMaster University

Calgary: Glenbow Library (Western Canadiana).

Carleton: Draws upon extensive library resources of the Ottawa area.

Dalhousie: National Research Council Atlantic Regional Laboratory Library, Nova Scotia Research Foundation, Bedford Institute of Oceanography Library, Naval Research Establishment Library.

Guelph: Uniroyal Research Laboratory.

Lakehead: "Only local public libraries."

Laurentian: Sudbury Public Library.

Laval: Bibliothèque des Franciscains, Séminaire de Québec, libraries of various departments of provincial government.

McGill: Arctic Institute (30,000 volumes), Sun Life Library, Royal Bank Library, Bibliothèque St. Sulpice.

McMaster: Steel Company of Canada (5,000 volumes, 175 technical journals, etc.), Hamilton Academy of Medicine (7,000 volumes, 100 medical journals).

Manitoba: Constituent colleges of the University, Cancer Foundation, several government research laboratories located on campus.

Moncton: None.

Montréal: Draws upon extensive library resources of Montreal.

Mount Allison: Université de Moncton Library.

Mount Saint Vincent: Dalhousie University Library, Nova Scotia Provincial Library, Nova Scotia Provincial Archives.

New Brunswick: Federal regional government libraries: Department of Forestry (forest biology), Department of Agriculture's Agricultural Research Station; Provincial Legislative Library; New Brunswick Research and Productivity Council Library.

Newfoundland: Public Archives, Legislative Library, Newfoundland Public Library Services.

Notre Dame: Nearest research libraries are University of British Columbia (480 miles), and Gonzaga University, Spokane, Washington (200 miles).

Nova Scotia Tech: Dalhousie University, Naval Research Establishment, Nova Scotia Research Foundation, National Research Council's

Atlantic Regional Laboratory Library, St. Mary's University, Bedford Institute of Oceanography.

OTTAWA: Carleton University, National Library, National Science Library, Department of Agriculture Library, Library of Parliament, Department of Mines Library, Ottawa Public Library.

PRINCE OF WALES: Legislative Library, St. Dunstan's University Library.

QUEEN'S: Royal Military College (93,000 volumes).

ST. DUNSTAN'S: None.

ST. FRANCIS XAVIER: None.

ST. MARY'S: Dalhousie University (full borrowing privileges for faculty, within library use for students), Nova Scotia Tech.

SASKATCHEWAN: (Saskatoon): Essentially none, except limited use of National Research Council's Prairie Regional Laboratory Library.

SASKATCHEWAN (Regina): Saskatchewan Power Corporation Library (6,000 books, 400 periodical titles, etc.); Legislative Library (70,000 volumes of government documents, law, Western Canadiana).

SIMON FRASER: University of British Columbia, Vancouver Public Library (400,000 volumes).

SIR GEORGE WILLIAMS: McGill, Université de Montréal, Fraser-Hickson Institute, Montreal City Library, Ecole des Hautes Etudes Commerciales, Saint-Sulpice, Arctic Institute of North America, Montreal Museum of Fine Arts, Jewish Public Library, Royal Bank of Canada.

TORONTO: Extensive library resources of city of Toronto.

TRENT: Canadian General Electric Company (electrical engineering and atomic research).

VICTORIA: Provincial Library and Provincial Archives.

WATERLOO: Waterloo and Kitchener Public Libraries, insurance and rubber company libraries, local Academy of Medicine Library.

WATERLOO LUTHERAN: Kitchener and Waterloo Public Libraries.

WESTERN ONTARIO: Huron College, King's College, Brescia College, London Public Library, etc.

WINDSOR: University of Michigan (reading privileges), Wayne State University (borrowing for faculty and graduate students), Detroit Public Library (borrowing privileges for annual fee).

YORK: University of Toronto (extramural privileges for York students and faculty), Toronto Public Library.

Also of interest is the extent to which college libraries need to depend upon other institutions. Here is a sampling of reports:

CENTRE DES ETUDES UNIVERSITAIRES: Bibliothèque des Trois-Rivières.

COLLÈGE DE SAINT-LAURENT: Bibliothèque Municipale de Saint-Laurent.

COLLÈGE MILITAIRE ROYAL DE SAINT-JEAN: Université de Montréal and McGill.

COLLÈGE SAINT-MARIE: Université de Montréal, McGill, Bibliothèque Saint-Sulpice, Montreal City Library (the first two, faculty only).

HURON COLLEGE: University of Western Ontario.

KING'S COLLEGE: London Public Library (400,000 volumes).

LOYOLA COLLEGE: McGill, Université de Montreal, Sir George Williams.

MACDONALD COLLEGE: Shawinigan Chemicals, Pulp and Paper Institute, Institute of Parasitology.

MARIANOPOLIS COLLEGE: Montreal City Library, McGill, Loyola.

ST. JOHN'S COLLEGE: University of Manitoba, Provincial Library of Manitoba.

ST. PAUL'S COLLEGE: University of Manitoba, Provincial Library of Manitoba.

UNITED COLLEGE LIBRARY: Legislative Library of Manitoba, Winnipeg Public Library, Medical College Library, University of Manitoba.

ST. PAUL UNIVERSITY: Carleton, Ottawa University, and numerous government libraries in Ottawa.

UNIVERSITY OF KING'S COLLEGE: Dalhousie University, Nova Scotia Archives, St. Mary's, Pine Hill Divinity Library.

UNIVERSITY OF NEW BRUNSWICK (St. John): Saint John Free Public Library, New Brunswick Museum.

UNIVERSITY OF ST. MICHAEL'S COLLEGE: St. Regis College, St. Augustine's College, Victoria University.

XAVIER COLLEGE: Sydney Public Library.

It is an obvious fact that the universities and colleges in centres richly endowed with library resources, e.g., Toronto, Montreal, and Ottawa, are in situations completely different from those located in small communities with virtually no other libraries nearby. Such institutions as Acadia, Brandon, Lakehead, Laurentian, Moncton, St. Dunstan's, St. Francis Xavier, Saskatchewan at Saskatoon, and Trent must be largely independent and self-reliant, standing on their own feet for all ordinary needs. For them, many types of library co-operation are rendered difficult by factors of distance, transportation, and other problems of communication. It is realistic to expect that they will have to duplicate extensively the holdings of other libraries; otherwise they would be creating serious inconveniencies for their faculties and students. Alternatively, travel funds may be provided to enable faculty members to visit larger libraries. As a natural corollary, the institutions in great library centres are presented with exceptional opportunities for co-operative efforts.

Summary

The number and variety of co-operative enterprises upon which the university libraries of Canada are engaged are impressive. Every important form of library co-operation is well represented among these undertakings: acquisition agreements, centralized processing, interlibrary loans, reciprocal borrowers' arrangements, union catalogues and union lists, and photographic services. Expansion and further development of these programmes are highly desirable and doubtless feasible.

The limitations of library co-operation, as well as its values, should be recognized. Economy may be achieved through some of the co-operative devices, but that should be an incidental consideration. The primary purposes ought to be the enrichment of library resources and the improvement of services to library users.

The success of programmes of library co-operation in universities must depend principally upon overall institutional attitudes, especially in the willingness to rationalize graduate and research activities. Libraries can hardly move farther or faster in inter-institutional agreements than their parent universities are willing to go. Universities must specify in detail, therefore, their fields of primary interest prior to agreements for specialization among libraries.

The national libraries of Canada are in a position to play key roles in any future programme of library co-operation. The National Library and the National Science Library, in particular, should assume leadership in such matters as completion of the National Union Catalogue and union lists. An imperative move is establishment of an Office of Canadian Library Resources in the National Library. The National Library's collecting responsibilities should be more specifically defined, and its book budget increased to $1,000,000 per year, in order to develop an institution commensurate with Canada's needs and to give it a high rank among the national libraries of the world.

Efforts to decentralize the National Union Catalogue should be resisted; instead, active efforts should be made to obtain there a virtually complete record of all important books in Canadian libraries, and to make the information promptly available as needed. A complete union catalogue in machine readable form should be the goal.

Library co-operation should be viewed from national, regional, and local standpoints. Some types, e.g., union catalogues and union lists, can be most economically and efficiently done on a national level. Other enterprises can properly be developed on regional or local bases. An example with great potentialities is the programme currently being developed in the province of Ontario under the guidance of the Ontario Council of University Librarians.

As a method of covering systematically the important foreign publications of the world, it is suggested that adoption of a modified Farmington Plan be considered by the Canadian university and research libraries.

With the probability that the Library of Congress, National Library of Canada, British Museum, and other co-operating libraries will soon develop a world-wide system of cataloguing, it is recommended that Canadian libraries participate in the international programme, rather than trying to establish local or regional projects.

The sharing of resources on a local, regional, and national basis should be encouraged in every practicable manner. In all regions of the country and most especially in the areas with limited financial resources, concentration on the development of research collections in a few institutions where graduate and professional study is well established will be of greatest benefit to everyone concerned.

10. Financial Support

Adequate financial support for resources, staff, space, and equipment is essential to an effective library programme. No words are heard more constantly in university library administration than budgets and funds. The reason for the repetition is fundamental: a modern university library can function effectively only when it receives adequate financing. To determine adequacy requires analysis of local situations, but certain useful criteria can be used and are indicative of the library's status in the institution. Such factors ought to be taken into account, for example, as the university's total income, student enrolment, size of the faculty, methods of instruction, whether the library is new or well established, and expenditures by other university libraries of comparable rank and character.

Standards for Financial Support

In its *Guide to Canadian University Library Standards* (1965) CACUL's University Library Standards Committee recommended the following factors be taken into account in assessing the necessary standard of financial support: (a) size and quality of bookstock, (b) size of total student enrolment, (c) extent and growth of graduate studies, (d) rate of growth of the institution, (e) amount of faculty research, (f) extension projects, (g) introduction of new courses. Of these seven points, the committee expressed the opinion that "The factor which most affects change in the amount of the budget from year to year is student enrolment"—a point of limited validity, for the building of library resources for the future must go on year in and year out in a dynamic university library situation, regardless of occasional fluctuations in the number of students to be served.

Standards are also considered in detail in another document sponsored by the Canadian Association of College and University Libraries: *Forecast of the Cost of Academic Library Services in Canada, 1965-1975; a Brief to the Bladen Commission on the Financing of Higher Education* (1964), discussed briefly in the introductory chapter. Recapitulating, the CACUL report recommended the following levels of support:

1. Ten percent of the institutional operating budget should be considered a minimum for the ordinary operation and development of established libraries, in universities with well established curricula, during the next 10 years.
2. New institutions, and others which are undertaking new programmes, should raise their library expenditures to considerably more than 10 percent of the institutional operating budget until the necessary library services are established.
3. A new institution should plan to spend an initial book fund of at least $500,000 (1964 value), plus a related amount for library salaries, during the first four years of library operation, and the expenditure of this money should begin early, at least two years (and, if possible, four or five years) before classes are to begin.
4. An established institution, before adopting a new programme, should ensure that the proposers of the programme have included in their initial estimates of cost an allowance (arrived at in consultation with the librarian) to provide the library service (books and staff) necessary to the success of the programme, and further, if the required service is extensive, that a lead time of two years be allowed between establishment of the budget and the enrolment of students.
5. A university, when appointing a specialist in a new specialty within an established discipline, should for the first year set up a special book fund, and the university's librarian be given the means and authority to spend the special fund with the advice of the appointee, to strengthen library holdings in the subject.
6. For purposes of planning the operating cost of Canadian academic libraries over the next 10 years should be estimated at an average annual total of $50,000,000.
7. The Canadian Universities Foundation, in its efforts to obtain assistance for the construction and enlargement of university buildings, should give high priority to library construction which is likely to require between $110,000,000 and $145,000,000 in the next 10 years.
8. Institutions should find ways of treating as non-lapsing capital funds all money which is appropriated for the purchase of material for their library collections.

9. Library service within an institution should be financed within the regular budget of the institution, whatever the source of that budget may be, and an institution receiving special grants of book money should be aware that it is accepting a responsibility to find a means of paying for the administration of the grants and the resulting collections.
10. Each institution, in order to use its library funds to the best advantage, and to make its library resources available to the whole institution, should provide for central control by the chief librarian of the acquisition and cataloguing of all library materials.
11. Universities and colleges should provide large increases in library budgets out of funds derived from ordinary sources, but because libraries are in part a national resource, the Canadian Universities Foundation should seek federal funds through the Canada Council and the National Library to establish and assist particular collections which are of national importance.
12. The Canadian Universities Foundation, in considering means of improving library resources should not underestimate the administrative cost of establishing and maintaining them, or overestimate the savings to be effected by automation of procedures.
13. The cost of library service to a graduate student (part-time or full-time) should be considered as eight times the cost of service to an undergraduate.
14. Each college and university should take full responsibility for library service to its own undergraduates, and not allow any graduate student to enter upon a programme for which adequate basic library resources are not held within the institution.

Other recommendations included the improvement of salary scales for librarians; more adequate scholarship funds for library school students; financial provision for study leaves for professional librarians; establishment of a Library Resources Office in the National Library, to co-ordinate university and college library development and co-operation on a national scale; and a general survey of Canadian academic libraries (the origin of the present study).

Some of the series of recommendations and proposals should doubtless be labeled goals rather than established standards, no matter how desirable.

Since 1959, another national organization, the Association of College and Research Libraries (a Division of the American Library Association) has had an officially-adopted set of standards. This statement lists, as factors which influence the budgetary needs of the library, "The library's holdings, the prevailing methods of instruction, the size of faculty and student body, the extent to which the college encourages and provides for individual study, and the variety of graduate offerings" — criteria similar to those listed in the CACUL standards. The ACRL budget standard goes on to state:

> The library budget should be determined in relation to the total budget of the institution for educational and general purposes. The program of library service outlined in these standards will normally require a minimum of 5 percent of the total educational and general budget. The percentage must be higher if the library's holdings are seriously deficient, if there is rapid expansion in student population or course offerings, or if the institution fosters a wide range of studies at the master's level or program of independent study. While the allocation of library funds for specific purposes will depend on the needs of the individual institution, experience shows that a good college library usually spends twice as much (or more) for salaries as it does for books.
>
> It should be considered a serious danger signal by the college authorities if the library budget sinks appreciably below the median ratio of library expenditures to total educational and general institutional expenditures for comparable institutions as indicated in the latest annual college library statistics.

Two observations should be made about the ACRL standards: first is the five percent minimum level for support, compared to the CACUL minimum of 10 percent— possibly an indication that the Canadian libraries have more catching up to do in their development, though the point is debatable in the case of many U.S. college and university libraries; and, second, the ACRL standards were prepared for college rather than university libraries, which perhaps should be rated by different criteria.

Present Financial Situation of Libraries

With the goals, ideals, and recommended standards stated above as background, an examination of the actual financial situation at present for Canadian college and university libraries is in order. Following are pertinent data as reported by the individual institutions:

Library and Institutional Expenditures, 1961–66

Institution	*Av. Annual Library Expend. 1961–66*	*Av. Annual Expend. for Books, Periodicals, Binding 1961–66*	*Av. Annual Total Educ. and General Expend. of Institution 1961–66*	*Library's Percentage of Total Expend. 1961–66*
Acadia	$ 56,604	$ 24,629	$ 1,515,613	3.7
Alberta	985,772	460,047	20,036,000	4.9
Bishop's	49,397	20,798	836,896	5.9
Brandon	60,280	30,430	Not reported	
British Columbia	1,356,662	665,126	20,094,329	6.7
Brock	189,578	124,420	760,276	25.0
Calgary	381,649	185,895	3,924,800	9.7
Carleton	300,867	118,969	3,833,434	7.8
Dalhousie	228,064	91,710	5,692,967	3.9
Guelph	264,000	96,500	12,200,000	2.2
Lakehead	131,098	77,600	721,870	18.3
Laurentian	102,964	57,187	1,067,496	9.6
Laval	673,309	256,434	12,555,852	5.4
McGill	1,002,617	295,640	23,796,366	4.2
McMaster	540,983	250,467	7,084,177	7.8
Manitoba	541,876	182,389	11,179,216	4.8
Moncton	67,766	43,333	706,283	9.6
Montréal	733,609	324,291	11,491,975	6.3
Mount Allison	122,200	71,955	1,575,265	7.7
Mt. St. Vincent	40,224	Not reported	661,832	6.0
New Brunswick	170,598	89,513	3,719,200	4.6
Newfoundland	165,849	92,087	2,254,638	7.4
Notre Dame	46,646	18,805	556,596	8.4
Nova Scotia Tech	46,139	21,472	1,018,647	4.5
Ottawa	259,680	135,600	Unavailable	
Queen's	452,306	185,828	$ 7,695,800	5.9
St. Dunstan's	26,534	15,835	352,007	7.5
St. Francis Xavier	73,511	44,185	2,084,765	3.5
St. Mary's	52,898	21,619	796,707	6.6
Saskatchewan	506,483	217,607	11,684,424	5.7
Sasktachewan (Regina)	159,877	88,658		
Sherbrooke	278,400	164,500	3,304,400	8.4
Simon Fraser	366,613	243,039	1,405,797	26.1
Sir George Williams	367,600	145,139	3,788,021	9.8
Toronto	2,337,616	800,757	33,014,412	7.4
Trent	179,000	114,000	889,427	20.1
Victoria	469,255	252,287	3,144,562	14.8
Waterloo	360,631	190,202	5,528,308	6.5
Waterloo Lutheran	95,625	43,376	1,190,469	8.0
Western Ontario	575,442	268,068	10,905,541	5.3
Windsor	365,336	212,957	3,453,166	10.6
York	374,442	173,915	2,181,231	17.2
				8.7 av.

A number of the newer institutions reported for less than five years, since they had not been in existence that long. In this group are Brock (2 years), Lakehead (3 years), Guelph (1 year), Moncton (3 years), Notre Dame (4 years), Nova Scotia Tech (4 years), Simon Fraser (2 years), Trent (3 years)—examples of the expanding character of Canadian higher education.

A distinction should also be made between the newer and older universities in the percentage of total institutional educational and general expenditures received by the libraries. The phenomenally high percentages reported by Brock, Lakehead, Simon Fraser, Trent, and York are doubtless accounted for by the concentration of funds on rapid library development during the initial period or organization, and these levels could hardly be maintained over a longer term.

For the older, well-established institutions, only two—Victoria and Windsor—reached and exceeded the CACUL recommendation of 10 percent of the total institutional expenditures. Several others — Acadia, Alberta, Dalhousie, Guelph, McGill, Manitoba, New Brunswick, Nova Scotia Tech., St. Francis Xavier — dropped below the much lower ACRL standard of five percent.

The rising level of library support is revealed by the last year of the five-year period, 1965-66. Following are the figures reported for total library and institutional expenditures during that year and percentage received by libraries:

Library and Institutional Expenditures, 1965–66

Institution	*Expend. for Books, etc. 1965–66*	*Total Library Expend. 1965–66*	*Total Institutional Expend. 1965–66*	*Percentage Received by Lib. 1965–66*
Acadia	$ 45,000	$ 84,420	$ 1,930,377	4.4
Alberta	708,437	1,4[illegible]9,861	30,330,000	4.8
Bishop's	32,896	71,956	1,142,455	6.3
British Columbia	1,706,119	2,768,358	24,698,725	11.2
Brock	134,867	229,157	1,063,586	21.5
Calgary	263,225	602,247	7,210,000	8.3
Carleton	215,442	535,975	6,158,294	8.7
Dalhousie	165,600	408,050	7,883,639	5.2
Guelph	96,500	264,600	12,200,000	2.2
Lakehead	49,429	112,027	1,019,065	11.1
Laurentian	77,877	183,839	1,764,389	10.4
Laval	338,700	1,000,000	19,516,924	5.1
McGill	507,055	1,489,805	31,639,116	4.7
McMaster	415,063	850,055	10,447,885	8.1
Manitoba	281,816	738,194	14,831,374	4.9
Moncton	50,000	91,002	1,031,778	8.8
Montréal	465,265	1,007,305	17,794,715	5.7
Mount Allison	110,774	199,000	2,119,327	9.4
Mt. St. Vincent	21,500	58,020	966,600	6.0
New Brunswick	142,244	306,542	5,208,000	5.9
Newfoundland	127,989	233,980	3,218,443	7.1
Notre Dame	44,494	85,202	884,983	9.6
Nova Scotia Tech	25,788	56,684	1,316,890	4.3
Ottawa	234,000	409,400	12,809,684	3.2
Queen's	365,277	829,528	10,325,000	8.0
St. Dunstan's	25,415	49,090	622,393	7.9
St. Francis Xavier	82,991	143,781	2,966,735	4.8
St. Mary's	37,739	89,403	1,052,368	8.5

Institution	*Expend. for Books, etc. 1965–66*	*Total Library Expend. 1965–66*	*Total Institutional Expend. 1965–66*	*Percentage Received by Lib. 1965–66*
Saskatchewan	327,600	769,000	16,138,424 Inc. with Saskatoon	6.5
Saskatchewan (Regina)	174,100	284,063	4,767,000	10.2
Sherbrooke	300,000	488,000	3,917,513	17.4
Simon Fraser	446,294	689,462	5,088,489	11.3
Sir Geo. Williams	248,280	584,928	48,022,000	7.9
Toronto	1,444,724	3,807,576	1,520,572	15.2
Trent	140,000	231,000	5,280,541	14.8
Victoria	432,723	781,003	9,623,799	7.4
Waterloo	403,480	716,604	1,904,574	8.2
Waterloo Lutheran	71,146	156,887	14,762,364	6.2
Western Ontario	393,614	912,804	4,811,466	12.6
Windsor	374,190	606,920	5,024,277	13.5
York	295,437	681,168	$253,013,764	8.4av.
Totals	$12,016,988	$25,076,899		

Even though total library expenditures and book expenditures in 1965-66 represented a substantial growth over the five-year average for 1961-66, the percentage went down from 8.7 to 8.3, in terms of total institutional expenditures. Experience elsewhere frequently has shown that the larger a university's budget becomes the smaller the percentage appropriated to the library, despite the increase in dollars received by the library.

To bring the figures on financial support as nearly up to date as possible, the university libraries were asked to estimate their actual expenditures for 1966-67 and their budgets for 1967-68, if these data were available. No attempt was made to collect total institutional expenditures or percentages received by the libraries. The statistics reported are as follows:

Library Expenditures and Budgets, 1966–68

Institution	*Total Library Expend. 1966–67 (est.)*	*Expend. for Books, etc. 1966–67 (est.)*	*Library Budget 1967–68*	*Budget for Books 1967–68*
Acadia	$ 138,110	$ 55,000	$ 173,700	$ 64,000
Alberta	2,200,000	1,086,000	2,764,360	1,333,000
Bishop's	210,000	142,000	180,000	110,000
Brandon	131,000		150,400	66,450
British Columbia	3,048,386	1,580,726	3,264,386	1,318,761
Calgary	1,173,314	742,378	1,486,241	758,000
Carleton	829,447	334,000	1,154,493	445,000
Dalhousie	931,235	457,605	1,200,000	600,000
Lakehead	300,750	183,100	410,320	203,000
Laurentian	354,000	205,000	447,000	245,000
Laval	1,600,000	480,000	2,032,000	625,000
McGill	1,868,460	615,000	2,125,000	710,000

Institution	*Total Library Expend. 1966–67 (est.)*	*Expend. for Books, etc. 1966–67 (est.)*	*Library Budget 1967–68*	*Budget for Books 1967–68*
McMaster	1,078,000	524,000	1,400,000	750,000
Manitoba	850,000	375,000	1,166,083	427,300
Moncton	170,000	76,500	226,000	86,500
Mt. St. Vincent	64,600	22,500	70,000	25,000
New Brunswick	447,531	217,331	764,000	311,000
Newfoundland	446,000	238,314	600,000	340,000
Notre Dame	98,028	42,000	140,000	53,653
Nova Scotia Tech	70,808	30,822	80,685	35,000
Ottawa	629,245	335,000	1,088,803	472,306
Prince of Wales	130,000	80,000	Unavailable	
Queen's	1,003,700	430,000	1,250,000	412,400
St. Francis Xavier	153,000	76,500	Unavailable	
St. Mary's	108,000	43,000	166,900	75,000
Saskatchewan	900,000	390,000	1,120,000	460,000
Saskatchewan (Regina)	435,902	216,500	661,771	296,200
Simon Fraser	1,373,690	740,153	1,429,528	624,000
Sir Geo. Williams	840,000	358,000	1,089,000	398,000
Toronto	4,855,400	1,639,600	6,115,800	1,927,000
Trent	281,750	195,000	493,000	302,000
Victoria	980,000	500,000	1,340,000	600,000
Waterloo	1,016,845	525,000	1,155,788	550,000
Waterloo Lutheran	187,000	80,000	225,000	98,300
Western Ontario	1,210,000	463,650	2,200,000	1,000,000
Windsor	754,000	425,000	873,000	476,000
York	1,077,595	530,000	1,400,000	700,000
Totals	$31,945,796	$14,434,679	$40,403,258	$16,897,870

Several aspects of the foregoing table deserve comment. First is the striking increase in total library expenditures. Eliminating the institutions which did not report both 1965-66 and 1966-67 figures, the comparative statistics for the two years are:

Total library expenditures,	1965-66:	$24,184,142
	1966-67:	30,667,951

The increase of $6,483,809 for the one year was about 7.9 percent. The comparative book expenditures were:

1965-66:	$11,674,847
1966-67:	13,648,679

Here the total increase of $1,973,832 was about 8.5 percent.

Projected budgets for 1967-68 are still more impressive. Even omitting the Prince of Wales College and St. Francis Xavier University, which were unable to provide figures, the total operating budgets for the remaining 33 universities came to $39,287,470 (contrasted to expenditures at $24,184,142 in 1965-66 and of $30,667,951 in 1966-67). The increase in book funds to $16,347,870 represents a 40 percent rise above 1965-66. At this rate, Canadian university libraries will soon make up for any ground that they may have lost by a late start.

Comparisons with U.S. University Libraries

For purposes of comparison, it may be useful to cite statistics of expenditures for U.S. university libraries in 1965-66. The leading 25 such institutions in terms of total library expenditures and of expenditures for books, periodicals, and binding, as reported by the Association of Research Libraries for 1965-66, were:

Expenditures of U.S. University Libraries, 1965–66

Institution	*Total Library Operating Expend.*	*Books, Period., and Binding*	*Percentage for Books, etc.*
Harvard Univ.	$6,728,455	$1,596,989	23.7
Univ. Calif.—B.	4,672,388	1,382,883	29.5
Univ. Illinois	4,454,756	1,744,763	39.1
Yale Univ.	4,353,112	1,420,206	32.6
Univ. Calif.—L.A.	4,295,751	1,428,584	33.2
Univ. Michigan	3,949,783	1,066,365	26.9
Univ. Toronto	3,911,496	1,348,938	34.4
Cornell Univ.	3,686,998	1,149,001	31.1
Stanford Univ.	3,349,394	1,074,801	32.0
Columbia Univ.	3,347,542	927,875	27.7
Washington Univ.	2,761,506	840,028	30.4
Indiana Univ.	2,724,047	1,116,335	40.9
Univ. Wisconsin	2,592,790	1,107,503	42.7
Univ. Chicago	2,555,730	904,012	35.3
Univ. Minnesota	2,534,362	866,345	34.1
Ohio State Univ.	2,443,921	622,734	25.4
Univ. Texas	2,165,491	1,065,798	49.2
Univ. Pennsylvania	1,960,744	655,402	33.4
Wayne State Univ.	1,894,717	581,535	30.6
Pennsylvania St. Univ.	1,865,713	752,648	40.3
Louisiana St. Univ.	1,858,842	760,916	40.9
Michigan State Univ.	1,818,783	783,259	43.0
Univ. Maryland	1,812,344	742,963	40.9
Princeton Univ.	1,786,221	671,953	37.6
Purdue Univ.	1,749,123	615,409	35.1

Per Capita Expenditures

A criterion of adequacy stressed by the standards cited earlier is library expenditure per student. Further refinements, such as a distinction between graduate and undergraduate students and number of faculty and staff to be served, are desirable, but overall student enrolment is a rough measure. Following are the data for 1965-66:

Per Capita Expenditures, 1965–66

Institution	*Enrolment*	*Total Library Expend.*	*Per Capita Expend.*
Acadia	1,594	$ 84,420	$ 53
Alberta	11,078	1,469,861	133
Bishop's	848	71,956	85
Brandon	784	95,000	121

Institution	*Enrolment*	*Total Library Expend.*	*Per Capita Expend.*
British Columbia	17,360	2,768,358	159
Brock	550	229,157	417
Calgary	4,127	602,247	146
Carleton	3,690	535,975	145
Dalhousie	3,603	408,050	113
Guelph	3,408	264,600	78
Lakehead	732	112,027	153
Laurentian	1,129	183,839	163
Laval	8,693	1,000,000	115
McGill	12,886	1,489,805	116
McMaster	4,667	850,055	182
Manitoba	9,444	738,194	78
Moncton	920	91,002	99
Mount Allison	1,233	199,000	161
Mt. St. Vincent	610	58,020	85
New Brunswick	3,677	306,542	83
Newfoundland	4,380	233,980	53
Notre Dame	596	85,202	143
Nova Scotia Tech	432	56,684	131
Ottawa	4,570	409,400	89
Queen's	5,927	829,528	140
St. Dunstan's	755	49,090	65
St. Francis Xavier	1,937	143,781	74
St. Mary's	1,037	89,403	86
Saskatchewan	9,058	769,000	85
Saskatchewan (Regina)	2,677	284,063	106
Sherbrooke	2,082	488,000	234
Simon Fraser	4,196	689,462	163
Sir George Williams	8,256	584,928	71
Toronto	19,034	3,807,576	200
Trent	526	231,000	44
Victoria	3,497	581,003	166
Waterloo	5,755	716,604	124
Waterloo Lutheran	2,426	156,887	65
Western Ontario	6,603	912,804	138
Windsor	2,854	606,920	213
York	2,740	681,168	249
Totals	179,589	$256,291,340	$130 av.

Again, the table is skewed somewhat by higher than normal per capita expenditures in new institutions, but many of the large, well-established universities are spending considerably more than the per capita average of $130. The wide variation among the universities in the per capita expenditures for library support is apparent. No fixed standard is recognized, because individual institutions differ too much in their educational programmes and needs and state of library development. A reasonable level of support would be a minimum of $150 per capita.

Division of Funds

The ACRL standards state that "a good college library usually spends twice as much (or more) for salaries as it does for books." The actual division of expenditures found among Canadian university libraries in 1965-66 was as follows:

Division of Library Funds, 1965–66

Institution	*Percent for Books, etc.*	*Percent for Salaries and Wages*	*Percent for Equipment, Supplies, etc.*
Acadia	42.6	53.7	3.7
Alberta	48.2	48.5	3.3
Bishop's	45.7	51.8	2.5
British Columbia	61.6	33.5	4.9
Brock	59.0	35.0	6.0
Calgary	48.0	47.0	5.0
Carleton	40.0	53.0	7.0
Dalhousie	40.9	54.9	4.2
Guelph	36.4	53.0	10.6
Laurentian	42.0	48.0	10.0
Laval	33.8	54.2	12.0
McGill	34.5	57.0	8.5
McMaster	48.8	45.4	5.8
Manitoba	43.0	56.0	1.0
Moncton	40.0	52.0	8.0
Montréal	46.0	51.0	3.0
Mount Allison	50.0	47.0	3.0
Mt. St. Vincent	34.5	60.4	5.1
New Brunswick	46.4	47.3	6.3
Newfoundland	47.4	44.7	7.9
Notre Dame	52.2	42.8	5.0
Nova Scotia Tech	45.5	52.9	1.6
Ottawa	60.0	37.0	3.0
Queen's	43.4	48.7	7.9
St. Dunstan's	43.5	47.0	9.5
St. Francis Xavier	38.0	55.0	7.0
St. Mary's	40.0	57.0	3.0
Saskatchewan	42.5	50.2	7.3
Saskatchewan (Regina)	61.3	36.2	2.5
Sherbrooke	51.0	45.0	4.0
Simon Fraser	64.7	24.6	10.7
Sir George Williams	38.6	49.9	11.5
Toronto	38.0	55.5	6.5
Trent	63.2	30.2	6.6
Victoria	55.4	38.8	5.8
Waterloo	56.3	39.4	4.3
Waterloo Lutheran	46.0	47.0	7.0
Western Ontario	43.1	52.7	4.2
Windsor	61.6	36.2	6.4
York	43.3	54.7	2.0
Average Percentages	47.0	46.9	6.1

The average expenditure for books in this group of 40 universities was almost exactly the same as for salaries—approximately 47 percent in each instance. It is of interest to compare the percentages with the top 25 U.S. university libraries cited above, where the percentage for books ranges from 23.7 at Harvard University to 49.2 at the University of Texas, with an average of 34.8.

From the Canadian point of view, the libraries conforming most closely to the ACRL standard are Laval, McGill, Mount Saint Vincent, St. Francis Xavier, and Toronto. No dogmatic judgments should be made on this matter without further investigation. If a library has automated many of its technical routines and processes and resorts to a high ratio of blanket ordering, for example, its personnel requirements may be reduced, releasing more funds for book purchases.

Future Budgetary Needs

The librarians were asked to undertake some crystal-ball gazing and to estimate their future budgetary needs for collection development during the decade 1966-76. Uninhibited by any grim realities, and simply projecting what they regarded as optimum situations, the librarians produced some rather startling figures. In summary, the replies were as follows:

ACADIA: $475,000-500,000 per year.

ALBERTA: Total budget to increase from $2,300,000 in 1966-67 to $13,000,000 in 1975-76.

BISHOP'S: $2,500,000 total.

BRANDON: For books, $1,750,000; for staff $3,500,000.

BRITISH COLUMBIA: Annual average of $1,500,000 to 1976.

BROCK: $200,000-250,000 per year to 1970; $300,000-350,000 per year therafter.

CALGARY: $23,000,000 total.

GUELPH: $10,000,000 total.

LAKEHEAD: $1,500,000-2,000,000.

LAURENTIAN: Total budget to increase from $300,000 in 1966-67 to $1,330,000-1,548,000 in 1975-76.

LAVAL: $648,000 in 1967-68 to $2,000,000 in 1971-72.

MCGILL: $800,000 in 1967-68 to $2,000,000 in 1975-76.

MCMASTER: $15,000,000 total.

MANITOBA: $7,500,000 total.

MOUNT SAINT VINCENT: $500,000 total.

NEW BRUNSWICK: 10-13 percent of institutional operating expenditures.

NEWFOUNDLAND: $5,000,000 total.

NOTRE DAME: $1,000,000 total.

NOVA SCOTIA TECH: $1,000,000 total.

OTTAWA: $7,000,000 total.

PRINCE OF WALES: $100,000 per year.

QUEEN'S: $400,000 for 1967-68, rising to $1,600,000 per year by 1975, books only.

SAINT MARY'S: $50,000 per year.

SASKATCHEWAN: $4,800,000 (books only) total.

SASKATCHEWAN (REGINA): $8,000,000.

SIMON FRASER: $10,485,000 total.

SIR GEORGE WILLIAMS: $337,920 in 1966-67 to $750,000 in 1975-76, collection budget.

TORONTO: Book fund, $8,000,000; total budget $24,000,000, in 1975-76.

TRENT: $4,200,000 total.

VICTORIA: $10,000,000 total.

WATERLOO: Rise in book budget to $1,000,000.

WATERLOO LUTHERAN: $2,306,400 for books and processing to bring collection up to standard.

WESTERN ONTARIO: Budget rise from $2,000,000 in 1967-68 to $10,000,000 in 1976-77.

WINDSOR: $6,500,000 total.

YORK: $11,000,000 total.

Taking a long-range view of the matter, as the librarians were doing, with the various factors involved—larger student enrolments, more graduate students, expanding faculties, new programmes, larger library staffs, inflationary costs, etc.—the projections for the most part appear reasonable and probably attainable.

Financing of College Libraries

The principal concern of the foregoing discussion of financial support and administration has been the university libraries. A separate examination should be made of a number of the federated, constituent, associated, affiliated, and independent colleges of Canada. In some instances, though not in all, their figures on enrolment, expenditures, and other vital statistics are included in the university library totals, if there is a formal connection. The facts reported for the college group are as follows:

College Library and Institutional Expenditures, 1961–66

Institution	*Student Enrolment*	*Av. Annual Expend. 1961–66 Library*	*Av. Annual Expend. for Books 1961–66*	*Total Inst. Expend. 1961–66 Av.*	*Library's Percentage*	*Student Per Capita Expend.*
Centre des Etudes Universitaires	788	$14,851	$ 7,967	$ 220,331	6.5	$ 19
Collège Ste-Anne-de-la Pocatière	511	31,256	8,533	764,932	4.1	61
Collège Saint-Laurent	491	23,860	8,262	744,451	3.2	48
Collège Jean-de-Brébeuf	561	36,847	8,267	392,904	9.3	65
Collège Militaire Royal de Saint Jean	371	Unavailable	22,290	2,286,652		
Collège Sainte-Marie (Montréal)	4,439	70,231	22,489	1,201,501	5.9	16
École Polytechnique de Montréal	2,753	48,586	11,403	2,512,975	1.9	18
Huron College (London)	483	36,000 (3 years)	21,350 (1 year)	467,500 (2 years)	7.7	74
King's College (London)	65	15,559	9,882	171,171	9.1	239
Loyola College (Montreal)	4,794	152,885 (4 years)	87,024 (4 years)	2,549,476 (2 years)	6.0	32
Macdonald College (Montréal)	1,647	97,996	29,482	Unavailable		58
Marianopolis College (Montréal)	435	35,000 (1 year)	13,372 (4 years)	317,029 (4 years)	11.1	80
Petit Séminaire de Québec	360	92,855 (2 years)	12,400	545,000 (2 years)	17.0	258
St. John's College (Winnipeg)	319	20,256 (4 years)	8,242 (2 years)	368,235 (4 years)	5.5	63
St. Paul's College (Winnipeg)	524	25,551	10,330	347,563	7.3	49
Séminaire Saint-Augustin	581	58,288 (2 years)	29,187 (2 years)	480,000 (1 year)	12.2	100
United College (Winnipeg)	1,724	63,006	25,803	1,324,440	4.8	36
Université Saint-Paul	547	74,000	Unavailable	510,000	14.5	135
University of King's College (Halifax)	243	Unavailable	15,276	Unavailable		
University of New Brunswick (St. John)	338	57,740 (1 year)	30,000 (1 year)	216,682 (1 year)	26.7	162
University of St. Michael's College (Toronto)	1,779	67,721	30,167	1,121,961	6.0	38
University of Trinity College (Toronto)	714	37,289	8,714	1,074,938	3.4	52
Victoria University (Toronto)	2,556	133,594	25,011	2,083,361	6.4	52
Xavier College (Sydney, N.S.)	470	25,981	13,663	Unavailable		55

The discrepancies among the colleges are even wider than with the universities in the two basic matters of percentage of institutional expenditures—1.9 to 26.7 percent—and student per capita expenditures, ranging from $16 to $258. The affiliated or federated colleges were fortunate to have considerably richer resources upon which to draw and were not limited to their own resources.

Several of the colleges supplied up-dated statistics, revealing progress similar to that found for the university libraries. Following are the more recent figures reported:

College Library Expenditures and Budgets, 1966–68

	Total Library Expend. 1966–67 (est.)	*Expend. for Books, etc. 1966–67 (est.)*	*Library Budget 1967–68*	*Budget for Books 1967–68*
Collège Jean-de Brébeuf	$ 47,500	$ 8,000	$ 48,948	$ 7,000
Collège Militaire Royal de St-Jean	Not reported	32,470	Not reported	37,000
Collège Sainte-Marie	133,670	38,000	173,600	53,120
Loyola College	282,000	114,000	362,093	150,000
St. John's College	27,000	10,335	33,020	11,400
St. Paul's College	42,000	20,000	45,000	22,000
Séminaire de Québec	76,000	3,800	82,000	31,000
Séminaire St-Augustin	61,735	22,700	65,235	25,000
Trinity College	53,565	12,725	56,265	13,790
Université St-Paul	120,000	60,000	125,000	60,000
University of King's College	21,800	4,000	14,700	4,500
Victoria University	241,000	45,000	350,153	64,500

Almost without exception, the 1966-67 figures show a very substantial increase over the 1961-66 averages, and 1967-68 is budgeted well above the 1966-67 expenditures.

Operating vs. Capital Budgets

A budgetary matter which has become a lively issue, especially in newly-established libraries, is the nature of appropriations. The librarians were asked specifically, "Do all the library's funds come out of the operating budget or are some capitalized?" The predominant practice is for library appropriations to be categorized as operating budgets. A few exceptions may be noted:

BRITISH COLUMBIA: Only gift funds are capitalized.

BROCK: Equipment is capitalized.

CALGARY: Medical collection purchased from capital grant.

LAVAL: Budget partly capitalized.

MCGILL: Endowed funds and gifts treated as capital funds.

McMaster: Some funds are capitalized.

Mount Allison: "Backlog fund of $50,000 annually; remainder from operating budget."

Ottawa: Budget capitalized in 1965-66 only.

Queen's: A special capital grant for book funds of $100,000 in 1965-66; a $30,000 grant made to Medical Library.

St. Dunstan's: Books are capitalized.

Saskatchewan: "Occasional special appropriations are made out of endowment income."

Saskatchewan (Regina): "Major equipment is capitalized."

Simon Fraser: "Acquisitions were capitalized in 1964-65 and 1965-66 only."

Sherbrooke: Practice varies; book funds may be capital grants.

Sir George Williams: "This year there is an additional capital allotment slated to the opening of the new university building."

Toronto: All operating except a few small endowments.

Waterloo: "Books have been capitalized up to and including 1965-66," but not in future.

Western Ontario: Some funds are capitalized.

Windsor: "Books and periodicals were capitalized until 1966-67, now operating."

York: "Funds for books, periodicals, binding and equipment are capitalized."

The general policy of treating library book budgets as part of operating costs has been officially confirmed in a communication from the federal government to the Association of Universities and Colleges of Canada. Nevertheless, there is considerable sentiment for granting special appropriations to new universities and to older institutions markedly deficient in their library resources. The principal arguments in favor of such grants is that the libraries need to undertake crash programmes of development to bring their holdings up to par and to have to rely solely on regular operating budgets condemns them to years of inadequate collections. The point would appear to be well taken. In the long run, regular operating funds are the logical source for library support, but special funds ought to be provided for a temporary catch-up period.

Non-Lapsing Funds

Related to the matter of grants is the question of whether unspent book funds lapse at the end of the fiscal year. If it is not a legal requirement that funds must lapse, the library's acquisitions can be more systematic and better planned. The general rule in governmentally-supported institutions is to lapse unspent funds. Exceptions were noted, however, at Alberta, Bishop's, Calgary, Guelph, McGill, Montréal, New Brunswick, and Waterloo. Several respondents stated that no funds ever lapsed because they were spent or overspent by the end of the year. Nevertheless, the pressures for hurried spending do not always produce the best results. The nature of the book market, slow delivery service, and other factors make desirable liberal time allowances. Capital and endowed funds, of course, are non-lapsing.

Provincial vs. Federal Funds

In the past, Canadian universities have relied heavily upon federal appropriations. Beginning in 1967, however, the federal government has withdrawn from direct support for operating costs of higher education, allowing the provinces to claim either 50 percent of the operating costs of all post-secondary education or $15 per capita of the population of the province. The funds go to the provinces without strings, and the provincial governments are permitted, therefore, to use their own judgements in deciding how much money shall be allocated to the universities and colleges, including their libraries.

In the few months since the new policy went into effect, it has become evident that universities will be more generously treated in some provinces than in others. According to a general survey of the situation which appeared in *The Financial Post* (February 11, 1967), the provinces of Alberta, Manitoba, Saskatchewan, Nova Scotia, and Newfoundland could be depended upon to be at least as generous as the federal government had been in the past. There were still question marks about how well British Columbia, Quebec, and Ontario would fare. No matter how generous their inclinations, it was indicated, the provinces will have serious difficulties in finding funds to do everything asked of them. As an example, Université Laval alone needs more than $130,000,000 between now and 1972-73 in capital appropriations. In 1966, Quebec universities asked for $60,000,000 from the provincial government to cover operating costs; they were awarded $44,000,000.

During the transition period from federal to provincial support, there will doubtless be difficult adjustments for both the universities and the provincial governments.

Special Grants

A highly useful complement to other funds for the Canadian university libraries in recent years has been special grants from the Canada Council.

The Council was created by the Government of Canada in 1957 "to foster and promote the study and enjoyment of, and the production of works in, the arts, humanities and social sciences." It carries out its task mainly through a broad programme of fellowships and grants of various types. The Council's income is derived principally from parliamentary appropriations and from endowments.

The Canada Council's grants to libraries are usually for the purpose of acquiring research collections in specialized fields. For example, grants were made to the University of Toronto for East Asiatic, Slavic, Islamic, medieval, Latin American, linguistic and economic history studies, and music; to McMaster for Slavic and medieval studies, political science, sociology and anthropology; to Manitoba for Slavic studies, humanities and social sciences; and to Western Ontario for medieval, Russian, and Latin American studies, music, and Romance languages. Institutions reporting grants and the total amounts received were:

Alberta	$50,000
British Columbia	20,000
Carleton	21,500
Dalhousie	36,000
Laval	44,500
McGill	30,000 per year
McMaster	28,000
Manitoba	7,500
Mount Allison	3,000
New Brunswick	20,000
Nova Scotia Tech	5,000
Ottawa	32,000
Queen's	39,350
Saskatchewan	42,250
Sherbrooke	8,000
Simon Fraser	13,000
Toronto	72,500
Victoria	6,500
Western Ontario	32,000

From the point of view of developing noteworthy research collections, the Canada Council would doubtless be well advised to concentrate its grants in a limited number of university libraries which have already demonstrated the above-average quality of their holdings—in short, to build to strength rather than to weakness.

A variety of other sources of support was reported by the libraries, from foundations, business organizations, friends of the library groups, endowments, and private donors. By far the largest of the supplementary funds came to the University of British Columbia, which has received nearly $4,000,000 during the past five years, including the magnificent H. R. Macmillan gift of $3,293,000 for collection development. Other university libraries which received substantial added funds, beyond regular appropriations and Canada Council grants, since 1961 are as follows, most of the figures approximate:

Alberta	$50,000	
Laurentian	23,300	
Laval	60,000	
McGill	105,000	per year
McMaster	60,000	
Manitoba	28,000	
New Brunswick	31,000	
Notre Dame	50,000	
Queen's	100,000	
Saskatchewan	13,000	
Sherbrooke	155,000	
(including $150,000 from the Kellogg Foundation for the foundation of the Medical Library)		
Toronto	$175,000	
Trent	45,500	
Victoria	20,000	
Western Ontario	20,000	
York	58,000	

The advantages of special funds are numerous, especially if not earmarked for too narrow purposes. Such funds permit a library to acquire rare books, build up specialized collections, and otherwise add distinction to its resources, activities which may be difficult to carry on with regular operating funds. Librarians are well justified in organizing active friends of libraries societies, and soliciting foundation, business, and private donations for programmes of this character.

In recent years, universities or their divisions have received an increasing number of research contracts from government, industry, and business. Such contracts frequently include a provision for "overhead costs," which may be used in whatever manner the institution sees fit. Since the contracts expect to draw heavily upon library resources, in most instances, a fair percentage of the overhead allowance should be allocated to the library budget for the acquisition of additional materials or for supporting staff.

Other Phases of Library Financing

Two of the most important divisions of library finance are treated in other chapters of the present study: book funds under "Technical Services" and staff salaries under "Personnel."

Summary

The level of financial support for Canadian university and college libraries has risen dramatically, during the past few years, above the low state which had prevailed for a long period. As a consequence, the libraries are making up lost ground in every major aspect of their programmes —physical plants, collection development, and larger staffs, in particular. Relatively few, however, come up to the CACUL recommendation of 10 percent of the total educational and general educational expenditures. Also, sustained financial support over a long period of time is essential to the growth of strong libraries. For collection development alone, the university libraries of Canada will need an additional $150,000,000 during the next decade, beyond present budget allotments and the current rate of annual increases, to reach a stage comparable to the top American university libraries.

A college or university library which spends less than $150 per capita, based on full-time student enrolment, is probably receiving substandard support. The average for the Canadian university libraries is $130 per capita.

A normal ratio of university library expenditures is approximately one-third for books and other materials and two-thirds for salaries and wages, or, on a percentage basis, 30-33 percent for books, periodicals, and binding; 60 percent for staff; and 7-10 percent for equipment, supplies, and general expense. Few of the Canadian university libraries conform to this pattern; the salaries and wages item is disproportionately low, in most instances, in relation to book expenditures. Is this an indication of low salaries, more efficient administration, or other factors? Further investigation of individual institutions would be required to find the answer.

Capital grants are recommended for new university libraries and for older university libraries which have suffered from sub-normal support in the past. Wherever permitted by institutional policy, also, book funds should be carried forward from one fiscal year to another, rather than lapsing.

Under new financing procedures, previously discussed, provincial governments are responsible directly for university financing all the way across Canada. During the transition period immediately ahead, the provincial governmental officials will need to be kept fully informed not only of the overall requirements of the universities but of the specific problems of library development.

Special grants from the Canada Council and other organizations and individuals are proving to be an important asset to the universities in building up research collections. These sources of support should be actively cultivated by the libraries. The libraries should also receive a reasonable share of overhead costs usually allowed in research contracts with government and industry.

11. Resources for Study and Research

THE FIRST ESSENTIAL in a university library is to possess the books, journals, proceedings of learned societies, government publications, newspapers, pamphlets, maps, microreproductions, and other materials required to meet the university's objectives in instruction, research, and publication. Beautiful buildings, well-trained staffs, and the most modern cataloguing and classification, circulation, and reference systems can compensate only to a limited degree for the absence of strong collections.

There are various approaches to testing the strength of a library's holdings. Among them are quantitative measurements, the checking of standard bibliographies, and detailed descriptions of collections. All these three methods will be applied in evaluating the resources of Canadian university libraries.

Mere size does not guarantee a great library or even a good one. The quality and richness of the book collections are more significant. The difference between a good library and a great library is the highly distinctive collections built around special subjects, the unusual books, the rare periodicals and newspapers, and the unique manuscripts, added to standard book collections. Nevertheless, the size of the total collections has frequently been demonstrated to be an important factor in judging adequacy.

In the American Council on Education publication, *An Assessment of Quality in Graduate Education* (Washington, D.C.: The Council, 1966), a strong correlation was found between the prestige of a university and the size of its library. Except for technical institutions dealing with a limited number of fields, all of the universities which rated as "Distinguished" or "Strong" have libraries exceeding a million-and-a-half volumes.

Another investigation published recently* found a direct relationship between the number and variety of doctoral degrees awarded and the strength of library resources in individual institutions. Among the 37 universities which awarded more than 700 doctoral degrees each during the decade 1953-62, only 10 hold less than 1,000,000 volumes. Several of the 10 have gone past the million mark since 1962.

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*Downs, R. B. "Doctoral Programs and Library Resources," *College and Research Libraries*, 27 (March 1966), 123-29, 141.

Holdings of Canadian University Libraries

The following table summarizes the holdings of Canadian university libraries as of July 1, 1966:

Holdings of Canadian University Libraries

Institution	*No. Vols. July 1, 1966*	*Av. No. Vols. Added 1961–66*	*Vols. Added 1965–66*	*No. Period. Sub.*
Acadia	130,225	4,428	6,725	700
Alberta	618,839	51,869	77,438	7,226
Bishop's	43,456	3,734	5,084	388
Brandon	50,950	9,000	11,970	586
British Columbia	782,695	48,793	66,095	8,730
Brock	42,000	21,500	23,500	998
Calgary	153,000	20,548	30,092	2,283
Carleton	149,380	19,516	35,834	1,781
Dalhousie	176,700	12,291	15,784	2,152
Guelph	148,200	4,455	10,000	3,850
Lakehead	51,652	8,720	6,043	650
Laurentian	64,796	8,498	10,789	1,522
Laval	525,950	37,923	50,288	5,767
McGill	1,026,248	36,199	47,680	13,754
McMaster	284,747	17,094	29,890	3,182
Manitoba	434,778	21,051	28,233	3,067
Moncton	51,500	7,752	9,881	350
Montréal	550,000	48,824	64,215	7,009
Mt. Allison	135,000	6,320	9,000	1,500
Mt. St. Vincent	64,517	2,161	3,400	500
New Brunswick	166,068	11,169	17,409	1,524
Newfoundland	137,579	10,241	13,714	1,900
Notre Dame	19,795	2,492	4,795	580
Nova Scotia Tech	32,560	1,779	2,908	748
Ottawa	250,000	21,555	28,000	3,640
Prince of Wales	10,000			104
Queen's	500,000	20,545	31,462	7,854
St. Dunstan's	29,006	2,038	2,000	
St. Francis Xavier	96,729	5,305	5,952	750
St. Mary's	62,992	2,680	2,560	634
Saskatchewan	326,000	25,306	30,247	4,300
Saskatchewan (Regina)	92,297	10,096	14,259	1,317
Sherbrooke	150,000	16,345	22,224	2,500
Simon Fraser	48,000		42,000	3,004
Sir George Williams	110,000	13,082	26,760	1,903
Toronto	2,034,934	134,641	202,579	23,256
Trent	48,375	15,248	21,950	800
Victoria	222,453	28,646	40,601	2,482
Waterloo	149,058	25,004	39,565	2,969
Waterloo Lutheran	79,061	9,694	13,610	1,387
Western Ontario	446,426	32,616	59,983	4,300
Windsor	240,370	25,196	45,547	2,710
York	143,952	27,905	54,718	1,805

Only two of the 43 institutions, Lakehead and St. Dunstan's, acquired fewer volumes in 1965-66 than their average for 1961-66, and many showed a spectacular increase. Furthermore, the rate of increase is accelerating, as is demonstrated by estimates supplied by the libraries of the number of volumes added in 1966-67 and the number of current periodical subscriptions. These up-dated statistics are as follows:

Volumes Added and Current Periodical Subscriptions, 1966–67

Institution	*Est. No. Vols. Added 1966–67*	*No. Current Period. Sub. 1966–67*
Acadia	12,000	650
Alberta	102,133	7,353
Bishop's	12,000	600
Brandon	6,203	651
British Columbia	103,631	8,813
Calgary	49,524	3,419
Carleton	40,000	2,025
Dalhousie	39,000	4,800
Lakehead	18,000	1,007
Laurentian	20,000	2,000
Laval	80,000	9,700
McGill	50,000	15,000
McMaster	40,000	3,730
Manitoba	40,000	4,500
Moncton	16,000	800
Montréal	50,000 (Central Library)	7,000
Mt. St. Vincent	4,000	650
New Brunswick	20,000	1,880
Newfoundland	12,689	2,038
Notre Dame	5,656	625
Ottawa	32,000	4,920
Prince of Wales	5,500	420
Queen's	34,041	3,597
St. Francis Xavier	7,000	806
St. Mary's	5,600	834
Saskatchewan	35,000	5,200
Saskatchewan (Regina)	20,500	1,834
Simon Fraser	50,000	3,500
Sir George Williams	35,000	2,003
Toronto	211,300	24,943
Trent	24,000	870
Victoria	50,151	2,965
Waterloo	48,000	3,381
Waterloo Lutheran	16,000	2,600
Western Ontario	120,000	5,000
Windsor	37,300	3,560
York	62,000	3,400

The only library which fell below its 1965-66 figure for volumes added was Brandon, and in a number of instances acquisitions doubled or more over the previous year. Periodical subscriptions also showed a satisfactory increase in a majority of libraries.

Standards for Book Collections

The CACUL *Guide to Canadian University Library Standards* states that "A minimum collection of 100,000 volumes is desirable. This minimum should be increased by 200 volumes for each graduate student until the total is overtaken by the standard of . . . 75 volumes per full-time student." Libraries which hold less than 100,000 volumes at present, a majority of them associated with new institutions, are:

- BRANDON
- BROCK
- LAKEHEAD
- LAURENTIAN
- MONCTON
- MOUNT SAINT VINCENT
- NOTRE DAME
- NOVA SCOTIA TECH
- PRINCE OF WALES
- ST. DUNSTAN'S
- ST. MARY'S
- TRENT
- WATERLOO LUTHERAN

Applying the standard of 75 volumes per full-time student as of the start of the fall term, 1966, produces the following:

Ratio of Volumes to Student Enrolment, 1966

Institution	*Enrolment*	*Total No. Volumes*	*Standard at 75 Vols. Per Capita*	*Deficiency or Surplus*
Acadia	1,594	130,225	119,470	+10,755
Alberta	11,078	618,839	830,850	−212,011
Bishop's	848	43,456	63,600	−20,144
Brandon	784	50,590	58,800	−8,210
British Columbia	17,360	782,695	1,301,000	−518,305
Brock	550	42,000	41,250	+750
Calgary	4,127	153,000	309,525	−156,525
Carleton	3,690	149,380	276,750	−127,370
Dalhousie	3,603	176,700	270,225	−93,525
Guelph	3,408	148,200	255,600	−107,400
Lakehead	732	51,652	54,900	−3,248
Laurentian	1,129	64,796	84,675	−19,879
Laval	8,693	525,950	651,975	−126,025
McGill	12,886	1,026,248	996,450	+59,798
McMaster	4,667	284,747	350,025	−65,278
Manitoba	9,444	434,778	528,300	−93,522
Moncton	920	51,500	69,000	−7,500
Montréal	10,466	550,000	784,950	−234,950
Mt. Allison	1,233	135,000	92,475	+42,525
Mt. St. Vincent	610	64,517	38,750	+25,747
New Brunswick	3,677	166,068	265,775	−99,707
Newfoundland	4,380	137,579	328,500	−190,901
Notre Dame	596	19,795	44,600	−24,805
Nova Scotia Tech	432	32,560	32,400	+160
Ottawa	4,570	250,000	342,750	−92,750
Prince of Wales	700	10,000	52,500	−42,500
Queen's	5,927	500,000	434,525	+65,475

Institution	*Enrolment*	*Total No. Volumes*	*Standard at 75 Vols. Per Capita*	*Deficiency or Surplus*
St. Dunstan's	755	29,006	56,625	−27,619
St. Francis Xavier	1,937	96,729	135,275	−42,546
St. Mary's	1,037	62,992	77,775	−14,783
Saskatchewan	9,058	326,000	679,350	−353,350
Saskatchewan (Regina)	2,679	92,297	200,925	−108,678
Sherbrooke	2,082	150,000	156,150	−6,150
Simon Fraser	4,196	48,000	314,700	−266,700
Sir George Williams	8,256	110,000	619,200	−509,200
Toronto	19,034	2,034,934	1,327,550	+707,384
Trent	526	48,375	39,450	+8,925
Victoria	3,497	222,453	262,275	−39,822
Waterloo	5,755	149,058	431,625	−282,567
Waterloo Lutheran	2,426	79,061	181,950	−102,889
Western Ontario	6,603	446,426	495,225	−48,799
Windsor	2,854	240,370	214,050	+26,320
York	2,740	143,952	205,500	−61,548

It should be noted that the standard applied above is exclusive of the additional standard of 200 volumes per graduate student which would increase the deficiencies. Even so, the minuses considerably exceed the pluses in the tabulation.

An American standard of the same kind provides another frame of reference. The Association of College and Research Libraries' *Standards for College Libraries* state that "no library can be expected to give effective support to the instructional program if it contains fewer than 50,000 carefully chosen volumes." Furthermore, it is stressed that there should be a direct relationship between the size of the collection and student enrolment, specifically: "up to 600 students, 50,000 volumes; for every additional 200 students, 10,000 volumes." Notre Dame, Nova Scotia Tech, Prince of Wales, and St. Dunstan's are still short of the 50,000 volume minimum. Application of the criterion of 10,000 volumes for every additional 200 students above 600 would reveal quantitative deficits in a number of other institutions.

Clapp-Jordan Formula

Another approach to establishing quantitative standards for university libraries was essayed by Verner W. Clapp and Robert T. Jordan of the Council on Library Resources.* Seven factors are weighed in the formula proposed by Clapp and Jordan: a basic undergraduate library, the number of faculty members, total number of students, undergraduates in honors or independent study programmes, number of fields of undergraduate concentration (i.e., major subject fields), number of fields of

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*See their: "Quantitative Criteria for Adequacy of Academic Library Collections," *College and Research Libraries*, 26 (Sept. 1965), 371-80.

graduate concentration at the master's level, and number of fields of graduate concentration at the doctoral level. For each category, a specified number of books, periodicals, and documents is required.

As applied to Canadian university libraries, the Clapp-Jordan formula produces, in summary, the figures shown in the following table, as compared with actual holdings:

Clapp-Jordan Formula for Volume Holdings, 1965–66

Institution	*No. of Vols.*	*Vols. Required by Formula*	*Deficiency or Surplus*
Acadia	130,225	126,102	+4,123
Alberta	618,836	1,420,961	−802,125
Bishop's	43,456	92,964	−49,508
British Columbia	782,695	1,993,570	−1,210,885
Brock	42,000	67,027	−25,027
Calgary	153,000	362,951	−209,951
Carleton	149,380	399,424	−250,044
Dalhousie	176,700	452,066	−275,366
Guelph	148,200	770,506	−622,306
Lakehead	51,652	73,980	−22,028
Laurentian	64,796	78,523	−13,727
McGill	1,026,248	1,747,842	−721,594
McMaster	284,747	657,216	−372,469
Manitoba	434,778	871,750	−436,972
Mount Allison	135,000	82,616	+52,384
Mt. St. Vincent	64,517	73,955	−9,438
New Brunswick	166,068	448,374	−282,306
Newfoundland	137,579	218,259	−80,680
Notre Dame	19,795	69,562	−49,767
Nova Scotia Tech	32,560	91,792	−59,232
Queen's	500,000	1,028,367	−528,367
St. Dunstan's	29,006	70,240	−41,234
St. Francis Xavier	96,729	124,962	−28,233
Saskatchewan	326,000	1,022,741	−696,741
Saskatchewan (Regina)	92,297	208,558	−116,261
Sherbrooke	150,000	234,644	−84,644
Simon Fraser	48,000	389,669	−341,669
Sir George Williams	110,000	211,773	−101,773
Toronto	2,034,934	1,748,193	+286,741
Trent	48,375	72,101	−23,726
Victoria	222,453	248,224	−25,771
Waterloo	149,058	564,601	−415,573
Waterloo Lutheran	79,061	114,497	−35,436
Western Ontario	446,426	971,486	−525,060
Windsor	240,370	426,606	−186,236
York	143,952	263,314	−119,362
Totals	9,378,893	17,799,416	

Data were not available from several institutions for application of the Clapp-Jordan formula. Major omissions are Laval and Montréal. The 36 universities included, however, offer a good test of the validity of the formula. With few exceptions—Acadia, Mount Allison, and Toronto—the libraries are below the number of volumes that would be required to meet the proposed standard. The widest discrepancies are in the large universities with extensive doctoral programmes. If the formula is accepted as a reasonable, objective measure of adequacy, it is clear that such university libraries as Alberta, British Columbia, Guelph, McGill, McMaster, Manitoba, New Brunswick, Queen's, Saskatchewan, Simon Fraser, Waterloo, and Western Ontario are seriously deficient, and must carry on major acquisition programmes to bring their resources up to par. Otherwise, proper support will not be provided for their institutions' extensive teaching and research commitments.

For the librarians who desire to analyze their collections in more detail, it is suggested that the Clapp-Jordan formula be applied in full including the number of titles of books and periodicals, volume holdings for periodicals, and volumes of documents.

To meet completely the Clapp-Jordan formula for volumes in the 36 libraries would require a total addition of 8,420,523, or nearly double the present holdings.

Annual Growth

A criterion related to total volume holdings is the rate of growth of the book collection. A steady increase is essential to any good academic library, without which its holdings become obsolescent and lose their interest and value. A library may be thought of as a living organism, constantly fed by new accessions; when its nourishment is cut off, it goes into a state of decline. Various factors, in addition to finances, may determine the rate of growth, e.g., the numbers of students and faculty members to be served, the scope of the curriculum, and whether the library is new or well established. Thus any hard and fast rule is of doubtful validity. A reasonable standard, applicable to most situations, is the addition of five volumes per year per student. According to 1966-67 figures, so far as they are available, all libraries reporting except McGill, St. Francis Xavier, Manitoba, Newfoundland, Saskatchewan (Saskatoon), and Sir George Williams exceeded the five volumes per capita measure.

Actually, in view of the wealth of materials available and the vast extent of current publishing in practically all scholarly fields, even a small academic library can hardly achieve broad representation with acquisitions of less than 5,000 volumes per year. Applying this criterion, Acadia, Bishop's, Guelph, Mount Saint Vincent, Notre Dame, Nova Scotia Tech, St. Dunstan's, and St. Mary's averaged under 5,000 volumes for the five-year period, 1961-66; and Mount Saint Vincent, Notre Dame, Nova Scotia Tech, St. Dunstan's, and St. Mary's in 1965-66. Complete figures are not available for 1966-67, but of the libraries reporting, only one acquired less than 5,000 volumes for the year—a very encouraging development.

American Comparisons

The volume holdings and rate of acquisitions of the 25 leading American university libraries in 1965-66, as reported by the Association of Research Libraries, may be of interest for purposes of comparison. The figures are as follows:

Volume Holdings in U.S. University Libraries, 1965–66

Institution	*Volumes in Library*	*Gross Volumes Added 1965–66*
Harvard Univ.	7,600,357	208,534
Yale Univ.	5,004,301	178,937
Univ. Illinois	4,083,634	197,190
Columbia Univ.	3,675,920	121,894
Univ. Michigan	3,516,355	142,859
Univ. California – B.	3,179,633	155,175
Cornell Univ.	2,892,539	171,012
Stanford Univ.	2,627,095	177,684
Univ. Chicago	2,504,250	122,560
Univ. Minnesota	2,480,097	109,758
Univ. California – L.A.	2,333,442	142,002
Princeton Univ.	2,097,737	106,390
Univ. Pennsylvania	1,958,602	72,954
Indiana Univ.	1,943,256	No rep.
Ohio State Univ.	1,845,069	99,926
Univ. Texas	1,838,645	115,836
Duke Univ.	1,783,803	71,706
Northwestern Univ.	1,771,899	65,605
Univ. Wisconsin	1,744,321	108,647
Univ. Virginia	1,532,577	156,460
J. Hopkins Univ.	1,500,510	100,998
Washington Univ.	1,466,906	78,522
Univ. N. Carolina	1,385,234	70,962
Louisiana St. Univ.	1,312,427	76,627
Rutgers Univ.	1,289,554	85,993

College Library Holdings

Statistics of college libraries, considered as a separate group, were reported as follows, for July 1, 1966:

College Library Holdings, 1965–66

Institution	*Total No. Volumes*	*Vols. Added 1965–66*	*No. Period. Sub.*
Centre Études Univ.	11,800	3,500	359
Coll. Ste-Anne-de-la-Pocatière	54,000	2,000	294
Coll. St-Laurent	52,000	2,646	253
Coll. Jean-de-Brébeuf	80,000	1,433	292
Coll. Militaire Royal	38,478	2,955	314
Coll. Sainte-Marie	90,000	4,654	435
Huron College	52,729	5,088	260
King's College	14,000	1,402	180

Institution	*Total No. Volumes*	*Vols. Added 1965–66*	*No. Period. Sub.*
Loyola College	80,671	13,649	2,400
Marianopolis Coll.	17,500	3,099	235
Petit Sém. de Québec	40,000	13,000	200
St. John's Coll.	20,829	1,963	86
St. Paul's Coll.	14,000	2,085	219
Sém. St-Augustin	21,336	11,264	244
United Coll.	87,000	8,795	472
Univ. King's Coll.	44,346	1,052	112
Univ. N.B. (St. John)	8,870	8,130	212
Univ. St. Michael's Coll.	118,054	6,156	515
Univ. Trinity Coll	69,477	2,477	160
Victoria Univ.	122,745	5,767	444
Xavier Coll.	29,200	9,750	180

There is considerable variety among these institutions. Some are independent, others are affiliated with universities; some are new and others old; most are strictly undergraduate colleges, a few have a limited number of graduate students; their enrolments vary from 65 at King's College to 4,794 at Loyola College. Perhaps 10 have library holdings reasonably adequate to serve an undergraduate clientele, and the others are definitely substandard, unless they are associated with universities with larger library collections upon which their students can draw.

Canadian Library Centres

The over-all strength in library resources of an area is a factor equal in importance with that of individual institutions. Modern libraries are dependent, as was previously demonstrated in the discussion of inter-library loans and in faculty members' use of libraries other than that of their home institution. Based on figures from the 1966-1967 edition of the *American Library Directory*, following is a list of Canadian centres holding more than 500,000 volumes each, ranked in order of size:

Canadian Library Centres

Centre	*No. of Volumes*
Toronto	7,345,000
Montreal	4,610,000
Ottawa	4,060,000
Vancouver	2,210,000
Quebec	1,340,000
Victoria	1,155,000
Edmonton	1,135,000
London	905,000
Halifax	800,000
Winnipeg	790,000
Kingston	747,000
Hamilton	726,000
Saskatoon	579,000
Calgary	514,000
St. John's (Newfoundland)	500,000

Included in the statistics are university, college, governmental, public, and special libraries. In these 15 centres is a total of about 27,500,000 volumes, constituting a major portion of Canada's library resources. In the group as a whole, Toronto, Montreal, and Ottawa are clearly in the lead, with Vancouver, Quebec, Victoria, and Edmonton following, but considerably in the rear.

Periodicals

A useful criterion for evaluating the strength of an academic library's collection is the number of current journals and retrospective files of periodicals. Periodical literature is basic in virtually all fields in the modern world, and the importance of developing extensive files of scholarly, specialized journals is generally recognized. Without them, any university or research library is seriously handicapped. Another type of serial publication, newspapers, is essential for certain types of research, especially in history and the other social sciences. The number of subscriptions for periodicals in the Canadian university libraries, as of 1965-66, was reported earlier in the present chapter.

Newspapers

Current newspaper subscriptions were reported as follows, together with microfilm files:

Newspaper Subscriptions, 1966

	No. Newspapers Currently Received		*No. Titles Received on Film*
Institution	*Canadian*	*Foreign*	
Acadia	16	5	1
Alberta	25	104	3
Bishop's	9		
Brandon	9	8	3
British Columbia	69	38	9
Brock	25		1
Calgary	22		11
Carleton	17	22	7
Dalhousie	23	11	3
Guelph	40	15	
Lakehead	23	14	1
Laurentian	22	27	1
Laval	98	15	8
McGill	140	12	8
McMaster	32		5
Manitoba	66	21	3
Moncton	50		1
Montréal	580		
Mount Allison	14	3	1
Mount Saint Vincent	20	2	1
New Brunswick	23	13	2
Newfoundland	19	10	1
Notre Dame	15	6	

	No. Newspapers Currently Received		*No. Titles Received on Film*
Institution	*Canadian*	*Foreign*	
Nova Scotia Tech	11		
Ottawa	15		
Prince of Wales	3		
Queen's	90	63	8
St. Dunstan's	14		
St. Francis Xavier	14		
St. Mary's	17		
Saskatchewan	58	34	
Saskatchewan (Regina)	19	3	1
Sherbrooke	14	5	1
Simon Fraser	40	27	15
Sir George Williams	5	4	6
Toronto	39	89	34
Trent	13	7	4
Victoria	17	11	4
Waterloo	11	18	5
Waterloo Lutheran	7	9	4
Western Ontario	34		7
Windsor	11	20	9
York	4	23	2

If the division between foreign and domestic titles was not stated, the total number of current newspapers received is entered above under Canadian.

Judging from the foregoing statistics, major newspaper resources are being built up at Alberta, British Columbia, Laval, McGill, Manitoba, Montréal, Queen's, Saskatchewan, and Toronto.

It should be noted that important newspaper indexing projects are under way at the Université de Montréal's Centre de Documentation des Lettres Canadiennes Françaises, covering approximately 175 titles; and the University of Saskatchewan at Regina, covering daily newspapers.*

Size of Periodical Collection

In the CACUL *Guide to Canadian University Library Standards* is a recommendation for the size of a university periodical collection. "The table is based on the combined figures of American and Canadian universities, excluding those with a total enrolment over 20,000 or with 50 percent of the student population in graduate studies." The table is as follows:

Ratio of Periodical Subscriptions to Student Enrolment

Total Student Population	*No. of Periodical Titles*
1,000	1,000
2,000	1,500
3,000	2,100

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*See: Johnpoll, Bernard K. "The Canada News Index," *Special Libraries*, 58 (Feb. 1967), 102-05.

Total Student Population	*No. of Periodical Titles*
4,000	2,600
5,000	3,100
6,000	3,600
7,000	4,100
8,000	4,600
9,000	5,100
10,000	5,600
11,000	6,200
12,000	6,700
13,000	7,250

Apparently, the recommended standard assumes that no library should contain less than 1,000 titles. Eleven of the universities included in the present study had fewer than 1,000 students in 1966. Institutions which reported total current subscriptions under 1,000 were:

ACADIA
BISHOP'S
BRANDON
BROCK
LAKEHEAD
MONCTON
MOUNT SAINT VINCENT
NOTRE DAME
NOVA SCOTIA TECH
PRINCE OF WALES
ST. FRANCIS XAVIER
ST. MARY'S
TRENT

Other university libraries which dropped below the recommended ratio of subscriptions to enrolment included:

CALGARY
CARLETON
MANITOBA
NEW BRUNSWICK
NEWFOUNDLAND
SASKATCHEWAN (Saskatoon and Regina)
SIR GEORGE WILLIAMS
WATERLOO

The Clapp-Jordan formula, used above for volume holdings, may also be applied to the number of periodical subscriptions.

Standard Lists of Periodicals

The use of standard lists tests periodical holdings both quantitatively and qualitatively. The Canadian college and university libraries were therefore asked to check their collections against three lists: (1) The list of 208 periodicals indexed in the *Social Sciences and Humanities Index;* (2) A list of 131 titles of special Canadian interest compiled from the *Canadian Index* and the *Index Analytique;* (3) A special list of 206 journals in the French language of importance to French language institutions and to others with significant holdings in this area (see Appendix B). The number of titles held for each of the three lists was reported as follows:

Subscriptions to Periodicals in Standard Lists

Institution	*Social Sciences and Humanities Index*	*Canadian Index-Index Analytique*	*French Language Titles*
Acadia	135	61	5
Alberta	196	95	107
Bishop's	127	37	9
Brandon	76	55	
British Columbia	201	109	107
Brock	136	63	17
Calgary	191	84	
Carleton	164	75	53
Cent. des Études Univ.	10	78	73
Coll. de St-Laurent	1	59	43
Coll. de Ste-Anne-de-la-Pocatière	6	71	44
Coll. Jean-de-Brébeuf	10	57	67
Coll. Militaire Royal	31	61	30
Coll. Ste-Marie	40	61	67
Dalhousie	167	77	48
Ecole Hautes Etudes Comm.	54	85	54
Guelph	141	77	
King's College	48	16	
Lakehead	119	68	15
Laurentian	169	116	183
Laval	186	125	201
Loyola	118		30
McGill	185	99	87
McMaster	207	131	75
Manitoba	75	90	50
Marianopolis	50	27	
Moncton	18	86	52
Montréal	141	105	179
Mount Allison	127	67	
Mt. St. Vincent	79	47	
New Brunswick	152	80	48
New Brunswick (St. John)	28	17	
Newfoundland	151	68	33
Notre Dame	77	41	2
Nova Scotia Tech	2	11	
Ottawa	130	108	
Petit Séminaire de Québec	10	65	62
Prince of Wales	43	53	

Institution	*Social Sciences and Humanities Index*	*Canadian Index-Index Analytique*	*French Language Titles*
Queen's	164	79	
St. Dunstan's	28	37	2
St. Francis Xavier	113	44	
St. John's Coll.	19	16	1
St. Mary's	82	49	26
St. Paul's Coll.	45	35	11
Saskatchewan	183	93	57
Saskatchewan (Regina)	153	64	20
Séminaire St-Augustin	5	47	39
Simon Fraser	172	83	64
Sir George Williams	177	91	34
Toronto	199	115	125
Trent	132	61	35
Université St-Paul	22	25	29
United College	98	36	8
Univ. of King's College	15	17	0
Univ. of St. Michael's Coll.	55	31	
Univ. of Trinity Coll.	50	16	7
Victoria University	87	43	
Univ. of Victoria	177	85	129
Waterloo	163	73	49
Waterloo Lutheran	117	63	9
Western Ontario	208	109	61
Windsor	196	100	82
Xavier College	36	25	
York	179	88	55

On overall strength, the data are somewhat surprising. The rank order of the first 19 libraries, together with the total number received of the 545 periodical titles listed, is as follows:

Laval	512
Laurentian	468
Toronto	439
Montréal	425
British Columbia	417
McMaster	413
Alberta	398
Victoria	391
Western Ontario	378
Windsor	378
McGill	371
Saskatchewan	333
York	322
Simon Fraser	319
Sir Geo. Williams	302
Carleton	292
Dalhousie	292

WATERLOO	285
NEW BRUNSWICK	280

The strongest subscription lists for the basic titles covered by the *Social Sciences and Humanities Index* are those of Western Ontario, McMaster, British Columbia, Toronto, Alberta, Windsor, Calgary, Laval, Saskatchewan, York, Victoria, and Sir George Williams, in that order, each receiving more than 175 of the 208 titles.

Strength in the French language list was less than one would have anticipated. Laval's showing was best: 201 of the 206 titles, followed by Laurentian with 183 and Montréal with 179. Only four other libraries received more than 100 titles: Victoria (129), Toronto (125), Alberta (107), and British Columbia (107).

Reference Works

Most fundamental of all publications to a good college or university library are the bibliographies, dictionaries, encyclopedias, yearbooks, biographical and statistical publications, and similar works which go to make up a library's reference collection. While seldom treating any subject in exhaustive detail, a reliable reference work is usually an excellent beginning point for research on practically any topic.

In the September 1965 issue of *Choice*: *Books for College Libraries*, an American Library Association publication, was presented a list of basic reference books, an "Opening Day Collection," which the editors felt "should be on the shelves of every academic library". The list totals 257 titles, ranging from one-volume handbooks to monumental encyclopedias.

To offset any possible American bias in the *Choice* list, a second list (see Appendix B) was prepared for the Canadian study—a sampling of 188 reference books one might expect to find in a Canadian academic library. All participating libraries were asked to test the quality of their collections by checking both lists. The results were as follows:

Holdings of Reference Books

Institution	*No. Choice Titles Held*	*No. Canadian Titles Held*
Acadia	204	97
Alberta	251	148
Bishop's	106	85
Brandon	159	82
British Columbia	254	167
Brock	197	107
Calgary	233	118
Carleton	184	142
Centre des Etudes Univ.	18	61
Collège St-Laurent	35	76

Institution	*No. Choice Titles Held*	*No. Canadian Titles Held*
Collège Ste-Anne-de-la Pocatière	65	134
Collège Jean-de-Brébeuf	79	110
Collège Militaire Royal	140	147
Collège Sainte-Marie	180	116
Dalhousie	217	103
Ecole des Hautes Etudes Comm.		141
Guelph	177	
Huron College	151	56
King's College	133	
Lakehead	174	98
Laurentian	224	131
Laval	240	176
Loyola	109	95
McGill	236	177
McMaster	257	130
Manitoba	231	118
Marianopolis	90	
Moncton	102	122
Montréal	159	156
Mount Allison	200	91
Mount St. Vincent	191	84
New Brunswick	253	156
New Brunswick (St. John)	185	162
Newfoundland	191	99
Notre Dame	203	78
Nova Scotia Tech	34	17
Ottawa	191	152
Petit Séminaire de Québec		88
Queen's	195	147
St. Dunstan's	95	18
St. Francis Xavier	144	82
St. John's College	65	49
St. Mary's	149	58
St. Paul's College	60	35
Saskatchewan	222	
Saskatchewan (Regina)	202	94
Séminaire St-Augustin	85	103
Simon Fraser	223	84
Sir George Williams	229	130
Toronto	245	177
Trent	170	109
Université Saint-Paul	218	84
United College	143	50
Univ. of King's College	200	45
Univ. of St. Michael's College	115	71
Univ. of Trinity College	84	65
Victoria University	138	103
University of Victoria	232	118
Waterloo	193	136
Waterloo Lutheran	174	96
Western Ontario	214	153
Windsor	211	134
Xavier College	79	43
York	228	120

Only McMaster reported complete holdings for the *Choice* list, but Alberta, British Columbia, Laval, New Brunswick, and Toronto closely approached completeness. The highest proportion of the Canadian list was held by McGill, Toronto, Laval, New Brunswick, Montréal, and Western Ontario, each with more than 150 of the 188 titles. Combining both lists, totalling 445 titles, the highest percentage of holdings is to be found in the following libraries, in the order named:

TORONTO	422
BRITISH COLUMBIA	421
LAVAL	416
MCGILL	413
NEW BRUNSWICK	409
ALBERTA	399
MCMASTER	387
WESTERN ONTARIO	367
SIR GEO. WILLIAMS	359
LAURENTIAN	355
CALGARY	351
VICTORIA	350
MANITOBA	349
YORK	348
WINDSOR	345
OTTAWA	343
QUEEN'S	342
WATERLOO	329
CARLETON	326
DALHOUSIE	320

Descriptions of Holdings

A third method of evaluating the resources of libraries, as indicated earlier, is detailed descriptions of collections. For this purpose, a comprehensive guide was developed and was used by the university libraries in evaluating their collections in all subject fields. It is to be hoped that individual libraries have found a study of their resources in this way to be a valuable exercise, giving them a more accurate knowledge of their own collections and serving as a guide to future development. The results of this intensive study are too detailed to report in full, and by their nature do not constitute an objective basis of comparison among libraries. In part, the findings are summarized in the chapter headed "Some specialized collections in Canadian libraries". The summary includes notes of some important resources in non-academic institutions — national, provincial, public, and special libraries — but does not pretend to be a comprehensive guide to research collections in the country. Leads to published information are provided in Appendix A, "Bibliographical References to Canadian Library Resources."

Summary

The university and college libraries of Canada are accelerating their growth, adding to their book, periodical, and other collections at an encouraging rate. Nevertheless, a majority of the university libraries fail to meet the CACUL standard of 75 volumes per capita of student enrolment, and 13 were under the 100,000 volume standard; a number are also below the ACRL standard of a minimum collection of 50,000 volumes, plus 10,000 volumes for every 200 students above 600. To meet the Clapp-Jordan formula for the quantitative adequacy of academic library collections would require doubling the present holdings of Canada's university libraries, i.e., from about 9,000,000 to 18,000,000 volumes.

A half-dozen of the leading libraries acquired less that five volumes per capita in 1966-67, and another group of smaller institutions added fewer than 5,000 volumes per year on the average between 1961-66.

Thirteen libraries in the group studied are receiving less than 1,000 current periodicals, and eight others, all large institutions, are below the CACUL recommended ratio of subscriptions to enrolment.

Deficiencies in holdings of important periodicals and reference works are apparent on the basis of the five lists checked by the libraries.

Thus, despite their rapid progress, the Canadian university libraries, on the whole, will require years of concentrated effort to bring their collections up to a high point of excellence.

12. Some Specialized Collections in Canadian Libraries

(The alphabetically-arranged subject list of special collections and specialized holdings, presented here, is drawn from a variety of sources but chiefly from individual library reports. No attempt is made to achieve completeness).

Acadian History

The Acadian Archives, at the Université de Moncton, specializes in the history of the Acadians and of the Maritime Provinces. More than 2,000 volumes relate to the Acadians or were written by them. There are also manuscripts of leaders and microfilms of pertinent foreign archives.

Mount Allison University Library has a special collection of Acadiana for the Maritime Provinces and northeast Maine; included are 19th and 20th century publications and some 18th century works.

Aeronautical Engineering

The DeHavilland Aircraft of Canada, Ltd., Downsview, Ontario, has an aeronautical engineering library of 40,000 items, consisting mainly of reports, periodicals, and basic texts. There are extensive holdings of U.K., U.S., and Canadian government aeronautical reports and AGARD literature; aerospace industry reports; reports of aeronautical institutes, etc.

The National Science Library's Aeronautical Library, Ottawa, holds 13,000 books, 1,200 periodical titles, 235,000 documents, and extensive files of microreproductions on aeronautics and related branches of engineering. The Library is a depository for the principal official aeronautical publications, Canadian and foreign.

The National Museum of Canada, Ottawa, has an excellent collection on aviation history.

African History

Loyola College, Montreal, is developing a strong research collection relating to South-East, Central, and South Africa, complemented by collections for other African regions at McGill and Sir George Williams.

Toronto reported a collection of 3,213 volumes dealing with African history.

Agriculture

The Agriculture Department Library, Ottawa, holds about 300,000 volumes and receives 4,300 serials relating to agriculture, economics, home economics, public administration, rural sociology, and veterinary medicine.

The Canada Department of Agriculture Research Branch Library, Lethbridge, Alberta, has a collection of 15,000 volumes, 58,000 agricultural bulletins, and other material on agriculture, biology, and veterinary medicine.

The principal collections of agricultural literature in the universities are as follows:

Guelph's Ontario Agricultural College Library, 55,000 volumes.
Alberta, 44,697 volumes.
British Columbia, 17,000 volumes; special strength in forestry.
McGill's Macdonald College Library, 15,000 volumes.

Alcoholism and Drug Addiction

The Addiction Research Foundation Library and Archives, Toronto, has 2,500 books, 4,000 reprint articles, and journal files on alcoholism and other drugs; it is also a depository for the Classified Abstract Archive of Alcohol Literature and for all Alcoholism Agencies' reports, newsletters, and bulletins. The Foundation is building up an extensive archive of world literature on the abuse, toxic and side effects of non-narcotic drugs (sedatives, stimulants, tranquilizers, and hallucinogens).

American History

Toronto holds about 14,000 volumes relating to U.S. history, but reported no areas of special strength. Western Ontario, with 11,215 volumes, stresses local history, Lincoln, Civil War, and slavery; recent and political history are in process of development there. British Columbia has 11,430 volumes, with emphasis on the western U.S.; scholarly journals are well represented and state and regional journals are being built up. McGill has 6,600 volumes dealing with American history in general and Alberta about 5,000 volumes (stressing western U.S.). Windsor, with 3,300 volumes, is specializing in Canadian-American relations and 19th and 20th century political and diplomatic history.

American Literature

In 1962, Williams found that British Columbia was "the only collection that is not strikingly weak in current American literature." British Columbia's present holdings total 5,840 volumes, with good periodical holdings, but no specialized collections.

Western Ontario has stressed this field for the past several years; its collections total 5,875 volumes and 6,795 microreproductions, including the Early American Imprints series and the Nineteenth Century American Literature on Microcard series.

Other substantial American literature collections are at Toronto, McGill, Alberta (4,090 volumes), Dalhousie (4,000 volumes), and Montréal (3,750 volumes).

Ancient History

In 1962, Williams reported that "Toronto's holdings are considerably stronger than those of any other Canadian library for ancient Greek and Roman history, and Toronto is the only library in the country with significant research collections on the ancient Near East." Queen's, half as large, was second in size. British Columbia was found strong in Greek history and Greek epigraphy.

Anglican Church

The Anglican Church of Canada's General Synod Archives, Toronto, has a library of 5,600 volumes, with special collections of religious literature printed in languages of Canadian Eskimos and Indians, and parish histories.

Anglo-Irish Literature

Toronto has a special collection of Anglo-Irish literature, totaling about 3,700 titles.

Anthropology

The National Museum of Canada, Ottawa, holds 55,000 volumes and 700 current periodicals dealing with anthropology, archaeology, and ethnology; folklore and folk arts; linguistics; museology; botany; vertebrate paleontology; zoology; Canadian history; and aviation and military history.

Williams rated the University of Toronto's collection in anthropology (5,490) volumes), supplemented to some extent by the Royal Ontario Museum, also in Toronto, as Canada's strongest among the universities.

British Columbia has 3,250 volumes in anthropology, stressing Pacific Northwest ethnography and Polynesia. The McGill anthropology collection totals 4,000 volumes.

Architecture

The leading university collection on architecture is held by McGill, with 10,418 volumes, including several hundred rare books; there is also a collection of 2,500 photographs of Canadian architecture.

The Blackader Library of Architecture, McGill University, is strong in French architecture of the 17th and 18th centuries, Vitruvius, and early printed books of architecture.

Toronto's architectural collection numbers 8,520 volumes, and Montréal reports 4,550 volumes in the field.

The National Science Library's Division of Building Research Library, Ottawa, holds 8,000 volumes, 75,000 documents, and 500 current periodicals on architecture; building laws and materials; construction, fire research; heating, ventilating, air conditioning, ice, snow; soil mechanics; and structural engineering.

Arctic

The Arctic Institute of North America Library, Montreal, collects all items concerning the polar regions, with emphasis on the Arctic and northern areas of the continent. The collection contains 8,000 volumes, 20,000 reprints and pamphlets, over 1,000 serials, and 10,500 maps, also manuscripts, phonograph records, photographs, and slides. The Library is believed to be one of the three or four most complete collections in the world dealing with the polar regions.

The Boreal Institute Library of the University of Alberta, Edmonton, specializes in the collection of literature, maps, and photographic material of all kinds dealing with the North. Its holdings number about 5,000 books and pamphlets and 250 journals are currently received.

The Ecole des Hautes Etudes Commerciales, Université de Montréal, has a special collection relating to the Arctic, including 2,500 volumes and 60,000 classified newspaper clippings.

The "Centre des Etudes Nordiques" of l'Université Laval has been building a research collection on all aspects of Northern Quebec and Labrador, including foreign materials—Scandinavian, Russian, etc.

The Toronto Public Library's Arctic collection is strong, particularly for the Canadian Arctic.

Art

The National Gallery of Canada Library, Ottawa, holds 16,700 books, 35,000 periodical volumes, 18,000 exhibition catalogues, 18,000 sales catalogues, 15,000 vertical file items, 25,800 slides, 115 filmstrips, and 56,600 photographs on art and related subjects. Emphasis is on painting and graphic arts; architecture and decorative arts are also included.

The Art Gallery of Ontario, Toronto, holds 10,000 volumes dealing with art history (excluding classical and Oriental art). The collection contains books, periodicals, museum publications, museum and exhibition catalogues, manuscripts, and clippings. There are special collections of 19th century English illustrated books and on sepulchral monuments.

The Ecole des Beaux-Arts, Montreal, the provincial government school, has one of the most extensive collections of books on fine arts in Canada.

The Toronto Public Library's Fine Arts Section has 15,000 books, 55 current periodicals, and more than 500,000 pictures relating to the fine and decorative arts, illustrations, printing design, and costume.

The largest university collection relating to the fine arts is at Toronto with 17,357 volumes dealing with the field in general. It has also 10,300 prints and mounted photographs and 58,000 slides on art subjects. There are 4,000 volumes on painting and sculpture.

McGill has a special collection of art works totaling 7,463 volumes, including a number of rare books, and 4,220 volumes on painting and sculpture. Alberta's fine arts section numbers 7,895 volumes.

The Ontario College of Art Library, Toronto, has 8,000 volumes, periodical files, and 9,000 slides dealing with medieval manuscripts, Japanese and Chinese prints, and private press books.

The Saskatoon Public Library has placed considerable emphasis on building up its fine arts collection.

Asian Studies. (See also **Chinese Literature, Far East,** and **Japanese Literature**).

British Columbia's Asian Studies Division holds about 22,000 titles (104,000 volumes) in Chinese, Japanese, and Korean; there are 155 current periodicals. Approximately 84 percent of the material is in Chinese, an area strongest for history and literature. The Japanese section is best for the social sciences and literature.

The East Asian Studies Library of the University of Toronto holds 65,000 volumes of Chinese material, and 22,000 volumes of works in Japanese, Indian, and European languages; and the Far Eastern Department of the Royal Ontario Museum (a part of the University of Toronto) has 7,686 volumes on Far Eastern art and archeology, mainly in European languages.

Astronomy

The Dominion Observatory Library, Ottawa, holds 45,000 volumes, 18,000 pamphlets, and 815 periodicals relating to astronomy, physics, and geophysics (especially optics and meteorology), seismology, and mathematics.

The only considerable university collection of astronomical literature noted was at the University of Toronto, holding 10,700 volumes.

Atomic Energy

Atomic Energy of Canada, Ltd. Library, Chalk River, Ontario, is centered on fundamental nuclear research and its industrial applications. The collections include 28,210 books and pamphlets, 1,175 current periodicals, 22,233 bound volumes of periodicals, 20,653 translations, and 169,143 research reports.

Audubon, J. J.

The Petit Séminaire de Québec has a complete set, in excellent condition, of Audubon's *Birds of America,* elephant folio edition.

Australian History and Literature

McGill University is reported to have the only large collection of Australian history and Literature in Canada.

Automotive Industry

The Windsor (Ontario) Public Library maintains a fairly extensive section of automotive literature, to support the local Ford, General Motors, and Chrysler plants.

Banking

The Bank of Canada Research Department Library, Ottawa, holds about 40,000 volumes and receives 1,050 current periodicals on economics, banking, money, investment, international finance, public finance, and economic conditions at home and abroad. There is a special collection of central bank publications.

The Royal Bank of Canada Library, Montreal, relates largely to economics, particularly finance and banking. The collection of 40,000 volumes is comprehensive for Canadian banking and economic conditions, but is also strong on a worldwide scale, especially for Latin America. Files of 200 periodicals are maintained and 800 titles are current.

The Bank of Nova Scotia Library, Toronto, has 5,500 books and, 1,200 current periodicals. The collections include bank publications from all over the world.

The Canadian Imperial Bank of Commerce, Toronto, holds 10,000 volumes, 15,000 pamphlets, and 200 periodicals on banking, finance, and economics.

Baptists

The Canadian Baptist Historical Collection at McMaster is reported to be the largest single gathering of Canadian Baptist documents in existence, covering all Canadian Baptist life west of the Atlantic provinces.

The Acadia University Library has a Maritime Baptist historical collection.

Bible

Queen's University Library has a notable collection of printed Bibles, 15th century to date, totaling about 3,500 volumes.

Bibliography

The most complete collection of bibliography in Canada is the University of Toronto's 26,000-volume holdings, comprehensive of all types of bibliographical publications.

Another major collection is held by McGill, with 13,000 volumes. Good, well-rounded collections, about one-half as large as McGill's, are in the British Columbia, Laval, and Western Ontario libraries. The National Library is also strong in bibliography.

Biological Sciences

The National Museum of Canada Library, Ottawa, is a research library specializing in the natural and human sciences: taxonomic works in botany, zoology and vertebrate paleontology, and to some extent geology and mineralogy; geographic distribution of plants and animals; also archaeology, physical anthropology, ethnology, etc., museum publications and reports of scientific expeditions. The main emphasis is on subjects pertaining to Canada. The collection of 60,000 volumes is divided between 40,000 volumes of periodicals and serials and 20,000 books.

The Blacker-Wood natural history library at McGill contains about 60,000 volumes, including 2,000 periodical sets. There are a number of incunabula, numerous original drawings and paintings, 20,000 manuscript letters of naturalists, and 250 Oriental manuscripts. The greatest strength is in zoology and ornithology.

The University of Toronto holds 46,100 volumes in the biological sciences, divided by volumes as follows: general biology, 16,000; botany, 11,200; zoology, 12,600; fish culture 2,100; animal culture, 1,600; forestry, 2,600. Each group is supplemented by pertinent collections of government documents.

Other strong biological science collections are held by British Columbia (25,374 volumes, 950 current periodicals), emphasizing botany and entomology; and by Laval (21,000 volumes, 600 periodicals), emphasizing marine biology, fisheries, botany, cytology, ecology, entomology, genetics, physiology, and radiobiology.

Other moderately well-developed biological collections in universities were reported by Western Ontario, 12,594 volumes; Montréal, 12,300 volumes, with emphasis on several branches of botany, taxonomy, and entomology; McGill 9,000 volumes, stressing marine sciences; Dalhousie, 8,000 volumes; and Alberta, with particular strength for entomology, and generally strong for botany, zoology, and genetics.

Blake, William

The Lande Blake collection, McGill University, contains all facsimile reproductions of Blake's color printing, books about Blake, Blake's engravings, and all books illustrated by Blake.

Botany

The Department of Agriculture's Plant Research Institute Library, Ottawa, has 11,000 volumes and 245 current periodicals in botany, including taxonomy, pathology, mycology, physiology, biochemistry, and ornamentals, and agrometeorology.

The Buller Memorial Library, Canada Department of Agriculture Research Station Library, Winnipeg, contains 1,500 volumes and 10,000 separates relating to botany, mycology, and plant pathology.

The Institut Botanique of the Université de Montréal possesses an outstanding collection of books and periodicals at the Montreal Botanical Garden, including the documentation collected by Brother Marie-Victorin.

British History

Williams rated the Toronto and McGill collections of British history as the first and second strongest in the country. McGill was noted to have strength in social history of the 17th century; Queen's was developing the medieval, Tudor, and contemporary periods; British Columbia, administrative history; and Western Ontario, the Tudor, Stuart, and Victorian periods.

Buchan, John

Queen's University has the working library of John Buchan, Lord Tweedsmuir, including manuscripts of his major works, first and later editions of all his publications, scrapbooks, and correspondence. The 5,000-volume book collection classifies mainly in the humanities and social sciences.

Building

The Department of Public Works Library, Ottawa, holds 18,000 volumes and 125 current periodicals on building; architecture, with emphasis on practical aspects and modern design; and engineering, especially civil, mechanical, and highway. A special collection of plans and photographs of Canadian government buildings is maintained.

Burns, Robert

The University of British Columbia Library's Robert Burns collection covers the subject intensively and extensively.

Canadian Fiction

The Victoria (B.C.) Public Library has a collection of 2,800 volumes of fiction by Canadian authors.

Canadian Historical Pictures

The Toronto Public Library has two collections of Canadian historical pictures, totaling nearly 5,000 items and consisting of oil paintings, watercolors, sketches, engravings, etchings, lithographs, and photographs. Catalogues have been published.

Canadian History. (See also **Acadian History, Canadian Northwest History, Cape Breton, French-Canadian History, Halifax History, Manitoba History, New Brunswick History, Nova Scotia History, Quebec History,** and **Saskatchewan History**).

Collections of Canadian history are of course numerous in academic and nonacademic libraries. The principal repositories are described or mentioned here.

The Public Archives Library, Ottawa, reported holdings of about 85,000 volumes and 25,000 pamphlets relating to Canadian history and genealogy from the earliest discoveries to the present day. Emphasis is on eastern Canada. The collection contains many rarities.

The Nova Scotia Legislative Library, Halifax, holds 50,000 volumes, with strength in Canadian history, biography, political science, and economics. Some 5,000 volumes pertain to Nova Scotia, relating to the history of the Province from its beginning to date.

The Quebec Department of Cultural Affairs Library and Archives, Quebec, holds 30,000 volumes of books, journals, etc., dealing with the history of French Canada; Canadian history in general; history of the United States, Great Britain, and France; regional and local history of Quebec; Canadian biography, genealogy, geography, and literature.

The Department of Northern Affairs and National Resources Library, Ottawa, holds 20,000 volumes relating to Canadian wildlife, national parks, all aspects of the north, Arctic and Subarctic, and the Eskimos.

The Library of Parliament, Ottawa, holds 11,000 volumes dealing with Canadian history, and also has a collection of bound Canadian pamphlets in English and French of approximately 20,000 volumes.

The Glenbow Foundation at Calgary maintains a library and archives emphasizing Western Canadian history. Included also are materials on the bordering states of the U.S., Alaska, and Canadian north. Subjects of strength are local politics, Social Credit movement, Indians and Eskimoes of Canada, natural history, ornithology, archaeology, military history, horses and horsemanship, and Canadian art. The library possesses about 20,000 books, pamphlets, and volumes of newspapers and periodicals. The archives contain microfilms of letters, diaries, and personal documents, chiefly from the Alberta region; records of business firms, societies, clubs, ethnic organizations, and political groups; a photographic collection of 70,000 items, emphasizing northern subjects; and tape recordings of songs from local Indian tribes.

The Edmonton Public Library aims toward completeness in its "Prairie Collection," which now contains 1,500 volumes.

The Lethbridge (Alberta) Public Library has the Buchanan collection of 1,500 volumes, plus numerous pamphlets, emphasizing Canadian political history and biography, Albertiana, and local history.

The Toronto Public Library is strong in English-Canadian history with excellent representation of local history, especially of Ontario and the Toronto area. Publications of local historical societies are nearly complete.

The New Brunswick Museum Libraries, St. John, have three collections relating to Canadian history: the Ganong library of New Brunswickana (3,500 volumes), the Webster Library of Canadiana (10,500 volumes), and a general library, which contains extensive holdings of New Brunswick newspapers. There are also several thousand pamphlets and collections of manuscripts.

The Provincial Library of Manitoba, Winnipeg, emphasizes the history of Manitoba and Western Canada.

The Queen's University Library has the personal papers of some 30 leaders who have been prominent in Canadian public life; the Pierce collection of Canadiana (6,300 volumes, including 1,300 French-Canadian imprints); and other important collections relating to Canadian history and literature, in printed and manuscript form.

The University of British Columbia Library's Howay-Reid collection of Canadian history and literature contains 12,000 volumes. The same institution's Murray collection is important in the same field. British Columbia history is a strong area, and the French-Canadian history section is well developed.

Toronto holds 6,000 volumes of Canadian history in its general stacks, exclusive of many works in its Rare Books division; the coverage is most complete since 1920 and good since 1860.

Laval's collection numbers 5,200 volumes and Montréal's about 5,000; the latter stresses legal, educational, agricultural, and religious history.

Western Ontario reported 5,385 volumes, exclusive of its local history materials.

McGill has the Lawrence M. Lande Canadiana Collection consisting of 2,328 titles, mainly published prior to 1867.

Bishop's University has a 5,000-volume collection of Canadiana and also about 1,000 items relating to the local history of the Eastern Townships of Quebec.

The Eric Dennis collection of Canadiana, Acadia University, covers practically all fields of Canadian life, with a high proportion of works on Canadian history.

Windsor has 2,776 volumes of Canadiana, specializing in Canadian-American relations, history of the Maritime Provinces, water and power development, Canadian social institutions, and protest movements.

Canadian history collections were also reported by Alberta, with 3,084 volumes, and Saskatchewan, with 2,720 volumes. New Brunswick has a special collection of Canadiana, chiefly published before 1867.

The University of King's College Library, Halifax, has an endowed collection of Canadiana (William Inglis Morse collection).

Canadian Literature

The leading collection of French-Canadian literature is at the Université de Montréal, with 20,000 volumes, consisting of periodicals, society publications, important series, and specialized collections. Authors of the 20th century are best represented. In the same area, Laval has 5,100 volumes; the University of Ottawa's Centre de Recherches en Littérature Canadienne-Française has good holdings; and Toronto's participation in the Farmington Plan has brought it a strong contemporary French-Canadian collection; Toronto's combined Canadian, English, and American holdings total 42,616 volumes. British Columbia reports that its collection of English language Canadian literature is "reasonably strong."

The University of Toronto Library has collections of manuscripts of literary works by Canadian authors, e.g., Mazo de la Roche, Hugh McLennan, Leonard Cohen, and Earle Birney.

Queen's University Library has the Pierce collection of Canadiana, about 15,000 volumes outstanding for humanistic studies, including literature, history, religion, politics, biography, and travel accounts, 17th century to 1950.

The John Daniel Logan Collection of Canadian literature, Acadia University, is composed of creative Canadian material and Canadian literary criticism.

The University of New Brunswick's Rufus Hathaway collection of Canadian literature contains more than 2,000 volumes of poetry, fiction, essays, biography, and criticism; it is strong in first and special editions of leading Canadian authors.

Canadian Northwest History

The Vancouver Public Library's Northwest History Collection covers the history of British Columbia and the old Oregon country prior to 1846. There is special strength for early B.C. directories, maps, and newspapers, local histories, Indians, boundary disputes, fur trade, exploration, and local documents.

Cape Breton

Xavier College, Sydney, has a Cape Bretoniana collection of about 8,000 items, including personal letters, diaries, etc.; Gaelic books; works brought over by Scottish immigrants; and Acadian history.

Chemistry

The principal university collections of chemical literature reported were at Toronto, 22,100 volumes; McGill, 13,700; Laval, 10,500; British Columbia, 10,275; Montréal, 7,000; and Western Ontario, 6,767 volumes.

The National Science Library's Division of Applied Chemistry, Ottawa, contains 12,000 volumes and 450 current periodicals classifying in chemistry, chemical technology, and physics.

Chinese Literature. (See also Asian Studies and Far East).

The University of Toronto Library's Chinese library holds 65,000 volumes, including the Mu Collection, covering a variety of subjects; it contains a number of rare books, manuscripts, and fine editions.

British Columbia's Asian Studies Division has 21,948 titles in 103,850 volumes, predominantly in Chinese and classifying in history and literature.

City Planning

British Columbia has 4,500 volumes relating to city planning and to landscape architecture. Montréal has 2,500 volumes on urbanism from a fine arts point of view.

The Central Mortgage and Housing Corporation Library, Ottawa, has 3,000 volumes, 5,000 pamphlets, and 190 current periodicals on city planning, urban renewal, housing, and architecture.

Classical Languages and Literature

Williams noted, in 1962, that "in classical languages and literatures, as in ancient history, Toronto stands alone," with monographic collections "at least twice as extensive as those of any other Canadian library," and strong serial files.

The next largest classical collections are at Laval (12,000 volumes), Ottawa (11,200 volumes) and at McGill, with 10,500 volumes (including 2,000 volumes of modern Greek), followed by Dalhousie (7,000 volumes), Queen's (6,386 volumes), Western Ontario (6,365 volumes), British Columbia (6,012 volumes), and Montréal (4,000 volumes).

Lee Ash's survey reports that with the possible exception of the University of Toronto, "there seems to be no other secular resources as complete as the Toronto Public Library's in Canada" for Latin and Greek literature. The extent of the collection in volumes was not reported.

Communications

The Canadian Broadcasting Corporation Research Library, Ottawa, specializes in communication, radio, television, audience research, and audiovisual education.

Congo

The Université Laval has a collection of about 2,000 publications on the Congo, consisting of works on geography, history, languages, flora and fauna, customs, etc.

Dentistry

The leading collections of dental literature were reported at the University of Toronto, with 13,947 volumes; Université de Montréal, with 7,000 volumes; and the University of Manitoba, with 6,634 volumes.

Dictionaries

University of Toronto Library has a comprehensive collection of dictionaries in all fields and practically all printed languages, including rare work.

Economics. (See also **Banking, Finance, Insurance, Labor, Taxation,** and **Unemployment**).

Because of the presence of colleges of commerce in practically all the universities, large and flourishing collections in economics and commerce are numerous, and generally comprehensive in coverage. The largest in terms of volumes is the Université de Montréal's Ecole des Hautes Etudes Commerciales, whose resources, independent of those of the central library, total 230,000 volumes and deal with all branches of the field; current serials number 1,300.

Other collections exceeding 10,000 and up to 50,000 volumes, in order of size, are McGill, Western Ontario, Laval, Toronto, British Columbia, Saskatchewan, Queen's, Carleton, Manitoba, McMaster, and Alberta.

The Finance Department Library, Ottawa, holds 26,000 volumes and 325 current periodicals concerned with Canadian economic conditions and policy, economic conditions abroad, public finance and public administration, taxation, personnel policy, etc.

Commerce and economics are also an area of interest for the Library of Parliament, Ottawa, which holds about 20,350 volumes in the field.

The Department of Trade and Commerce Library, Ottawa, holds 18,000 volumes, 20,000 documents and pamphlets, and 800 current periodicals relating to economic theory and conditions; foreign and domestic trade; tariffs; industries and commodities; and international economic relations.

The Vancouver Public Library holds about 100,000 volumes relating to commerce and economics, including 725 periodical files. The Toronto Public Library's Business Branch and central library also have comprehensive resources in the field.

Education

The most extensive collection relating to education is held by the University of Toronto, with 80,000 volumes, divided among the main library, Ontario College of Education, and the Ontario Institute for Studies in Education. The combined coverage is comprehensive of all major branches of the field.

Alberta also has a collection relating to all major divisions of education; there are 35,000 volumes, plus a textbook collection of 12,000 volumes.

Other sizeable university collections include Western Ontario (21,150 volumes), Montréal (25,000), McGill (23,000 volumes), British Columbia (17,700 volumes), and Manitoba (16,793 volumes). British Columbia and Western Ontario reported special collections of early Canadian textbooks.

The Department of Northern Affairs and National Resources, Northern Administration Branch, Education Division Library, Ottawa, holds 12,000 volumes and 10,000 pamphlets dealing with education, teaching, and school administration.

The Toronto Board of Education Library holds 18,000 books and 2,500 current periodicals to serve the needs of those concerned with education in Toronto.

The Canadian Teachers' Federation Library, Ottawa, has 6,000 volumes and 215 current periodicals on adult, primary, secondary, and technical education; educational psychology; school administration and teacher welfare.

Education, Higher

The Association of Universities and Colleges of Canada Library, Ottawa, holds 4,000 volumes and 250 current periodicals on higher education, with emphasis on Canada; the Library has a special collection of current Canadian, American and Commonwealth university calendars, and Canadian library handbooks.

Electrical Engineering

The National Science Library's Division of Radio and Electrical Engineering Library, Ottawa, has 10,000 volumes, 45,000 documents, and 450 current periodicals on electricity and electronics.

Electronics

The Defence Research Board's Defence Research Telecommunications Establishment Library, Ottawa, holds 12,000 volumes, 10,000 documents, and 250 current periodical titles relating to electronic engineering.

The Northern Electric Company's Research and Development Laboratories Library, Ottawa, has a collection of 6,000 volumes and 325 current periodicals dealing with electronics and telecommunications.

Engineering. (See also **Aeronautical Engineering, Building, Electrical Engineering, Highways, Mining, Steel,** and **Technology**).

The Public Works Department's Testing Laboratories Library, Ottawa, has 13,000 volumes dealing with civil engineering, strength of materials, soil mechanics, and general technology.

University libraries reporting more than 10,000 volumes each in engineering were the following, together with their prime specialities:

Toronto, 70,000 volumes: mechanical, electrical, mining, chemical, civil, sanitary, aeronautical.

British Columbia, 46,650 volumes: mechanical, electrical, mining, metallurgical, chemical, civil.

Ecole Polytechnique (Université de Montréal), 150,000 volumes: mechanical, electrical, mining, civil, sanitary, aeronautical.

McGill, 31,325 volumes: aerodynamics, fluid dynamics, electric communication, electric power, computer science, structural engineering, soil mechanics, materials science.

Laval, 27,000 volumes, 900 periodicals: mechanical, electrical, mining, civil, sanitary, aeronautical.

Queen's, 25,731 volumes: mechanical, electrical, mining, chemical, civil, sanitary, aeronautical.

Alberta, 21,800 volumes: mechanical, electrical, mining, chemical civil, sanitary, aeronautical.

Institutions holding 12,000-16,000 volumes, and usually covering all major fields, include Manitoba, Waterloo, Western Ontario, and Windsor.

The technology departments of several large public libraries, e.g., Toronto and Vancouver, have good working collections of engineering literature.

English Constitutional History

McGill University Library's Redpath Tracts is a collection of 25,000 pamphlets, 1561-1900, nearly all on English constitutional history.

English Literature

Williams noted that "Toronto has Canada's best research collection for English language and literature as a whole and for most subdivisions of the field."

British Columbia's holdings are rising rapidly in importance. Its present collection numbers 20,000 volumes, with strength in periodical files and special collections for Robert Burns and the Pre-Raphaelites;

over the next two years a collection of 50,000 volumes of English and Irish writers of the 19th century is to be acquired.

McGill combines English and American literature in its 36,725 volume collection. Ottawa reports 22,000 catalogued volumes for English only; Queen's, 18,237 volumes; Dalhousie, 18,000 volumes; Waterloo, 20,000 volumes; Western Ontario, 21,200 volumes; McMaster, 14,000 volumes; Saskatchewan, 12,900 volumes; and Alberta, 11,600 volumes.

English Literature—18th Century

A study by Professor W. J. Cameron of McMaster University, "The Development of 18th Century Studies in the British Commonwealth" (unpublished), estimated the number of volumes in university libraries in Canada, Australia, and New Zealand. Canadian universities containing more than 1,000 English imprints of the 18th century were McGill, 13,000; Toronto 12,000; McMaster, 10,000; Western Ontario, 2,500; British Columbia, 2,000; Queen's, 1,600. Samplings estimate the number of dramatists, poets, and prose writers represented in each collection.

English Poetry

According to Lee Ash's survey, "the fine holdings of the Toronto Public Library in English poetry would be hard to match in any other Canadian library," at least before 1940.

Entomology

The Department of Agriculture's Entomology Research Institute Library, Ottawa, holds over 15,000 volumes, 20,000 reprints, 6,500 maps, and 225 current periodicals relating to entomology, with some material on zoogeography.

European History

McGill University holds 22,570 volumes of modern European history, strongest for France, Scotland, England, Germany, and Russia.

Far East

The Royal Ontario Museum's Far Eastern Department Library (University of Toronto) holds 7,686 books, serials, and pamphlets on the art and archaeology of the Far East and related subjects.

Finance

The Department of Finance Library, Ottawa, has 25,000 volumes relating to economics, banking, public administration, public finance, management, and personnel. Official publications dealing with finance, federal and provincial, are strongly represented.

Fisheries

The Fisheries Department Library, Ottawa, holds about 26,000 volumes and 330 current periodicals on fishes, fisheries and fishing, marine biology, and oceanography.

The Biological Station of the Fisheries Research Board of Canada, St. Andrews, N.B., has a special library concentrating on fishery and marine biology, marine technology and oceanography. There are about 100,000 items of journals, texts, reports, reprints, symposia, and manuscripts.

The Great Lakes Institute Fisheries Laboratory (University of Toronto) has a collection of 50,000 reprints relating to physical limnology and aquatic biology, with special emphasis on fisheries.

The Institute of Fisheries Library (University of British Columbia) is strong for vertebrate marine biology, limnology, ecology, and oceanography. Its book and periodical collection is supplemented by 14,000 reprints.

Folklore

The Université Laval has 5,500 volumes, exclusive of 30 periodical files, on folklore. Its Archives de Folklore has preserved 25,000 documents of French-Canadian songs, stories, and legends.

Fore-Edge Paintings

Mount Saint Vincent University Library has a collection of 69 books with fore-edge paintings, 1767-1850.

Forestry

The Forestry Department Library, Ottawa, holds 60,000 volumes, 40,000 pamphlets, and 780 current periodicals on forestry and related subjects, meteorology, ecology, entomology, and pathology.

Laval has about 15,000 volumes in its Faculty of Forestry, plus a large collection of pamphlets; 600 periodicals are received currently.

British Columbia Forest Service Library, Victoria, deals with forestry and grazing, systemic botany, plant physiology, genetics, and plant breeding. There are 3,250 volumes of books and journals, 17,200 pamphlets, 8,600 technical abstracts, and 50,000 cards from the Oxford System of Decimal Classification for Forestry; 150 periodicals are current.

French-Canadian History

The Fraser-Hickson Institute, Montreal, holds about 30,000 volumes of French works, including the Library of the Institut Canadien. See its catalogue.

The Montreal Civic Library possesses the famous "Collection Gagnon" which aims to be as complete as possible for Canadian and especially French Canadian history.

French History

Laval has 3,700 volumes and 40 periodical files relating to French history. A similar collection, numbering 3,000 volumes, is held by Montréal.

French Language and Literature

The largest collections of French literature are held in Ontario and Quebec. The major assemblages are at Toronto, 24,017 volumes, with all periods represented, though there are many weak spots; Ottawa, 23,000 volumes; Montréal, 22,000 volumes, strongest for the 17th and 18th centuries and, among individual authors, for Voltaire, Diderot, Beaumarchais, and Proust; McGill, 16,000 volumes; Laval, 12,000 volumes; Queen's, 7,800 volumes, stressing Molière, Rousseau, Hugo, Balzac, Stendhal, and 20th century authors; Western Ontario, 8,270 volumes. In western Canada, fairly good working collections are available at Alberta, British Columbia, and Saskatchewan.

French Revolution

Western Ontario has a special collection of 900 volumes dealing with the French Revolution, consisting of periodicals, newspapers, collections of sources, collected works, and monographic works.

British Columbia's French history holdings are strongest for the 18th century and for the Revolutionary and Napoleonic periods.

Gaelic Literature

The Saint Francis Xavier Library has an extensive collection of books in Gaelic — songs, poetry, fiction, dictionaries, etc. For detailed description see Calum I. N. MacLeod's article, "The St. Francis Xavier University Celtic Collection," in the Canadian Library Association's *Special Collections in Canadian Libraries* (1967), p. 6-8, i-vii.

Dalhousie's Gaelic collection contains an interesting and valuable collection of 18th-19th century works, including many pamphlets printed in Cape Breton.

Galt, John

The University of Western Ontario Library has a comprehensive collection of first and other early editions of the works of John Galt.

Geography

The Geographical Branch of the Department of Mines and Technical Surveys, supplemented by the holdings of the Geological Survey and National Museum, Ottawa, were found by Williams to have the strongest library resources for geography in Canada. The best university collections were in Toronto and McGill. The Arctic Institute of North America Library in Montreal has a strong collection in all fields of polar geography.

The Mines and Technical Surveys Department's Geographical Branch Library, Ottawa, holds 30,000 volumes, 200,000 maps, 70,000 aerial and other photographs, and 200 current periodicals covering all aspects of geography — physical, mathematical, human, economic, political, military, and historical. Emphasis is on Canada.

The most extensive holdings of geographical literature in a university was noted at McGill with 16,200 volumes, though the collection is heavily weighted on the side of travel. Collections of 4,000-6,000 volumes are to be found at Toronto, Laval, McMaster, Queen's, and Montréal.

Geology

The Geological Survey of Canada Library, Ottawa, contains over 110,000 volumes with broad coverage of geological subjects: economic geology, palaeontology, palaeobotany, geophysics, geochemistry, water supply, petrology, geological cartography, etc.

The Ontario Department of Mines Library, Toronto, covers geology, mineralogy, and mining. *Its holdings include* 32,500 volumes, 13,000 miscellaneous reports and pamphlets, and 9,500 geological and geophysical maps.

The Geological Survey of Canada, Department of Energy, Mines & Resources, Calgary, is developing a library of 30,000 volumes and 250 periodicals on geology generally, and specifically petroleum, sedimentary and Pleistocene geology.

Queen's geology holdings are probably the second best in Canada, after the Geological Survey of Canada Library. Its Geology Library holds 25,000 volumes, with extensive coverage of geological survey reports, geological maps, and periodical and society publications. Among fields of emphasis are palaeobotany, economic geology, petrology, mineralogy, and geophysics.

Alberta's 13,000-volume geology collection is reasonably strong in all fields; emphasis is on paleontology, geochemistry, North American geology, and Pleistocene geology. Both Toronto and Montréal report collections of 12,000 volumes each, with various specialties. Other considerable collections are held by Laval, 8,000 volumes; British Columbia, 7,400 volumes; McGill, 6,750 volumes and a special collection of 1,450 volumes on early science and geology; and there are collections of about 5,000 volumes each at Waterloo, Dalhousie, and Manitoba. In 1965, the Laurentian University Library acquired the large library of the Canadian Institute of Mining and Metallurgy.

German Languages and Literature

There were five reasonably strong collections of Germanic languages and literature reported: Toronto, 16,961 volumes, with stress on Goethe, dictionaries of German dialects, periodical and society publications, and contemporary literature; McGill, 10,225 volumes, including a special collection by and about Goethe, and considerable strength for the medieval period, German Romanticism, and 20th century literature; British Columbia, 7,560 volumes, emphasizing Gottfried von Strasbourg, the medieval and classical periods, Naturalism, Impressionism, Expressionism; Alberta, 5,040 volumes, chiefly 18th to 20th century literature.

Government Publications

The Documents Library of the Public Printing and Stationery Department, Ottawa, maintains a complete collection of the publications of the Canadian Federal Government. The holdings number 20,000 volumes, 30,000 documents, and 10,000 pamphlets.

The Library of Parliament, Ottawa, is a depository for U.S. and U.N. documents and for publications of other international organizations; holds parliamentary papers for Great Britain and most Commonwealth countries; and English, American, French, and Commonwealth countries statutes. The Library's holdings of foreign documents total 51,000 volumes and of documents issued by international organizations, 4,000 volumes.

The Manitoba Provincial Library, Winnipeg, receives, as a depository, the official publications of Canada, Canadian provinces, the United States, United Nations, ILO, and Great Britain's House of Commons and House of Lords statutes, journals, and debates.

The Ontario Legislative Library, Toronto, has a file of Imperial blue books, 106 volumes of British government papers relating to Canada, 1803-11; almost complete file of Hansard; *Congressional Record,* 1789 to date; Ontario government publications ("probably the best collection in existence"); and is a full depository for U.S. publications.

The Saskatchewan Legislative Library, Regina, is a depository for Canadian government documents and has strong files of statutes, House and Senate journals, debates and proceedings, statistics, departmental reports, and official periodicals.

The Vancouver Public Library is an official depository for Canadian federal publications, 99 percent complete.

Features of leading university library collections of documents may be summarized as follows:

Alberta, 51,500 volumes: comprehensive coverage of principal international organizations, selective collecting from 32 foreign countries, Canadian federal complete and all provinces selective, and publications of 22 largest cities in Canada.

British Columbia: publications of numerous international organizations, of all major world governments, all Canadian federal and British Columbia, selective for other provinces, and municipal publications from throughout the world relating to planning, education, and public health.

Laval, 35,000 volumes: including chief international organizations, United States, Canadian federal government, and Quebec Province.

McGill, 19,000 volumes; including UN, UNESCO, FAO, and scattered representation from other international organizations, foreign governments (mainly U.K., U.S.A., and Australia), Canadian federal and provincial.

Montréal: principal international organizations, foreign (mainly U.S., France, and Great Britain), Canadian federal, Quebec Province, and Montreal municipal publications.

New Brunswick, 11,309 volumes: including UN and UNESCO publications; Great Britain, U.S., and Australia; Canadian federal, and New Brunswick provincial documents.

Queen's, approximately 60,000 volumes: covering all major international agencies; U.S., Great Britain, and Commonwealth countries; Canadian federal and selective provincial publications.

Toronto, 55,000 volumes: including international organizations comprehensively; Great Britain and other Commonwealth countries; United States and Latin America; and Canada, federal and provincial.

Haliburton, Thomas Chandler

The Haliburton collection in Acadia University contains all the author's published works and related material. Dalhousie and Western Ontario also have considerable collections of Haliburton first and other editions.

Halifax History

The Halifax (N.S.) Memorial Library has a collection of more than 1,000 volumes of books, pamphlets, and periodicals published in Halifax, about Halifax, or by Halifax authors.

Health Sciences

The Department of National Health and Welfare Library, Ottawa, holds 75,000 volumes relating to the health sciences and social security. Government publications in the field are strong, and there are 1,500 current periodical subscriptions. The Library has a film library of some 1,050 titles dealing with all aspects of health, public welfare, medicine and biology, physical fitness, and amateur sport.

Highways

The Canadian Good Roads Association Reference Library, Ottawa, has 6,000 volumes and 1,000 current periodicals dealing with traffic engineering, soils and materials, road construction and maintenance, transportation, highway design and planning, safety, and town planning.

Human Relations

The Centre de Recherche en Relations Humaines, in Montreal, maintains a research library of 12,000 volumes and 300 current periodicals relating to human behavior, general psychology, mass media, social psychology and anthropology.

Hume, David

The McGill University Library has all editions of Hume and books about Hume; also, 51 original letters.

Icelandic Literature

Manitoba's Icelandic collection totals about 3,700 books and 2,000 volumes of periodicals. The Library is eligible to receive all copyrighted publications issued in Iceland.

Illustrations

The Vancouver Public Library has about 500,000 prints, slides, and photographs in its collections. The Toronto Public Library's collections are equally extensive.

Immigration

The Citizenship and Immigration Department Library, Ottawa, reports more than 12,000 volumes and 280 current periodicals relating to immigration and emigration, citizenship, ethnic groups, Canadian Indians, and community development.

Incunabula

McGill University Library has 135 volumes of incunabula. Other incunabula collections reported were Toronto, 60; University of King's College, Halifax, 42; Pontifical Institute of Medieval Studies, Toronto, 25; and St. Paul University, Ottawa, 10.

Insurance

The Insurance Department Library, Ottawa, holds 7,600 volumes and other materials on all types of insurance and related subjects.

International Affairs

The Canadian Institute of International Affairs Library, Toronto, has 20,000 books, plus periodicals, newspapers, pamphlets, and other materials on international affairs. It is a United Nations depository library.

International Cooperation

The Centre d'Etude et de Coopération Internationale, attached to the Collège de l'Immaculée-Conception, Montreal, has 18,000 volumes dealing with the history, geography, customs, and educational systems of many underdeveloped countries, some of the material collected locally by missionaries.

International Law

The External Affairs Department Library, Ottawa, has a collection of 60,000 volumes and 330 periodicals dealing with international law, relations, and organizations; economic conditions and policy; and Canada's foreign relations and policy.

Islamic Literature

McGill University's Islamic Institute Library has 37,000 volumes on the Islamic countries, mainly in Arabic.

Toronto's Islamic collections total about 14,000 volumes, best for Arabic and Persian languages.

Italian Literature

Toronto's Italian literature collection is considered the best in Canada. Among the holdings are strong periodical files, society publications, and important sets. The Library is outstanding for the Renaissance period, including 700 plays. The drama is also well represented for later periods.

Japanese Literature (See also **Asian Studies** and **Far East**)

Both Toronto and British Columbia are developing collections of Japanese literature; the first is mainly concerned with literature, history, philosophy, and fine arts, the latter with the social sciences and literature.

Judaica

The Jewish Public Library of Toronto has 15,000 volumes of Judaica and works concerned with Jewish history, religion, philosophy, music, drama, humor, etc. There is a similar institution in the city of Montreal, specializing in Canadian Jewish documents.

Juvenile Literature

The Osborne collection of early children's books, Toronto Public Library, contains about 5,000 volumes published from 1505 to 1910.

Kipling, Rudyard

Dalhousie University has the Stewart collection of Kipling, comprising 4,000 volumes, 1,200 first and subsequent editions, 1,100 periodicals, 213 foreign editions, and 217 manuscripts, including letters. A catalogue has been published.

The Friedman Kipling collection at McGill includes 650 volumes by and about Kipling.

Labour

The Labour Department Library, Ottawa, holds 120,000 volumes, 35,000 documents and pamphlets, and 1,150 current periodicals, with emphasis on labour and labour legislation, trade unions, collective bargaining, employment, wages, automation, technical education, safety, and related areas. The Library collects the publications of labour departments of Canada and foreign countries, ILO publications since 1919; trade union periodicals and proceedings, and a variety of other labour literature.

The Canadian Labour Congress Library, Ottawa, has about 3,000 volumes and 100 current periodicals on labour economics, labour-management relations, trade unions, and social security.

Law, Andrew Bonar

The University of New Brunswick Library has the papers of Andrew Bonar Law, British Prime Minister, 1922-23.

Law

The Supreme Court of Canada Library, Ottawa, holds 145,000 volumes in law and closely related materials. Emphasis is on Canada, United Kingdom, Commonwealth, France, and Belgium.

Canada's leading law library, the Law Society of Upper Canada Library, is located in downtown Toronto; its holdings number about 100,000 volumes.

The Justice Department Library, Ottawa, has a collection of 30,000 volumes, principally Canadian and English law reports and texts.

The Department of Secretary of State Library, Ottawa, has 10,000 volumes of statutes and law reports of Canada and its provinces and of the United Kingdom.

The Saskatchewan Legislative Library holds 85,000 volumes, including a collection of law reports, periodicals, digests, texts, and statutes, the last covering Canada and its provinces, Great Britain and Ireland, the Commonwealth countries, and the United States.

The Law Society of Manitoba, Winnipeg, maintains a library of 45,000 volumes of law reports, textbooks, and periodicals for the use of the legal profession.

University law libraries holding more than 20,000 volumes each are the following, all general in scope, unless otherwise indicated:

Toronto, 57,300 volumes.

British Columbia, 51,000 volumes.

Queen's, 49,000 volumes.

Saskatchewan, 41,000 volumes.

McGill, 40,000 volumes, with specialization in air and space law and French legal history.

Dalhousie, 40,000 volumes; includes a special collection in legal history and jurisprudence.

Alberta, 38,000 volumes, with specialization in natural resources law, international law, land use planning, comparative family law, taxation.

Laval, 34,000 volumes; specialties: commercial law, criminal law, labour law, public utility law.

Ottawa, 25,000 volumes, with emphasis on French civil law and common law.

Western Ontario, 25,000 volumes.

The Osgoode Hall Law School Library, recently transferred to the York University campus, holds 25,000 volumes.

Leacock, Stephen

The McGill University Library has a special collection of all editions of Stephen Leacock's writings and many of his manuscripts.

The Stephen Leacock Memorial Home, Orillia, has Leacock's personal library of 5,000 volumes, 10,000 letters, and other memorabilia.

Legislative Reference

The Legislative Library of Ontario, Toronto, holds 140,000 books, 225 newspapers, 300 periodical files, etc., dealing with political science, economics, constitutional history and law, education, and Canadian and Ontario history.

The Provincial Library of Manitoba, Winnipeg, holds 75,000 volumes, 675,000 documents and pamphlets, 134 newspaper and 338 periodical subscriptions. Emphasis is on political science in all its phases to assist legislative reference. It receives the official publications of Canada and its provinces, U.S., U.N., I.L.O., and the British House of Commons and House of Lords statutes, journals, and debates.

The Quebec Legislative Library of about 250,000 volumes is strong in Canadian law and quite adequate for French, English, and American law; Canadian and American government publications; French Canadian publications; English Canadian publications, except in science; French literature; and social sciences in English and French.

The Alberta Provincial Library, Edmonton, holds 60,000 volumes and has special collections of Canadiana, Hudson's Bay Record Society, Alberta newspapers, sessional papers, and on legislation.

The British Columbia Provincial Library, Victoria, holds 380,000 volumes; there are special collections relating to government, shipping, Panama Canal, and British Columbia newspapers and periodicals.

The New Brunswick Legislative Library, Fredericton, has 37,500 volumes, with special attention to government publications and New Brunswickana.

The Legislative Library of Nova Scotia, Halifax, holds 52,000 volumes, specializing in Nova Scotiana, and federal and provincial documents.

The Legislative Library of Saskatchewan, Regina, reports 75,000 volumes and special collections of history, law, and social sciences; and government documents of Saskatchewan and the old North-West Territories.

Library Science

The largest collections of library science literature in Canada are at Toronto (reporting 20,104 volumes and 473 periodical files) and McGill

(15,700 volumes, including 4,500 volumes of periodicals). The University of Ottawa Library School Library holds 8,000 volumes and receives 50 current periodicals. Montreal has 6,738 volumes of books and journals. British Columbia noted 4,000 volumes and excellent periodical holdings. Dalhousie reported about 2,000 volumes.

The Canadian Library Association Library, Ottawa, has about 4,000 volumes and 50 current periodicals dealing with library science and Canadian biography and bibliography.

Manitoba History

The Provincial Library of Manitoba, Winnipeg, maintains an Archives Branch containing manuscripts, diaries, journals, and photographs on the history of Manitoba and of the North-West Territories. The Library's collection of newspapers covers all the towns and villages in the province.

Maps

Toronto's Map Library contains 50,000 maps, 408 atlases, and 109 gazetteers. British Columbia's map collection totals more than 42,000 items. Other substantial map collections were reported at Queen's (32,000), Laval (25,000, including 400 pre-1900 maps relating to New France, Canada, and Quebec), Alberta (20,000), Montreal (12,000), and McMaster (10,000).

Mary, Queen of Scots

The University of British Columbia Library's Salmond collection on Mary, Queen of Scots, covers its subject intensively.

Materia Medica

The University of Toronto's Best Institute has a valuable collection of early material on insulin, heparin, and cholesterol.

Mathematics

Two universities hold collections of mathematical literature of substantial size: Toronto, with 11,700 volumes, and McGill, with 11,000 volumes. Collections ranging between 5,000 and 7,000 volumes are at Laval, Montréal, Waterloo, Windsor, McMaster, Queen's, British Columbia, and Dalhousie.

Medical History

The McGill University Library holds Sir William Osler's library of medical and scientific history. A printed catalogue is available. The original collection contained 8,000 volumes, to which 16,000 volumes on the history of medicine and science have been added.

The University of British Columbia Woodward Library has a special collection on the history of medicine, including rare books, totaling about 7,500 volumes.

The Medical Library Service (Keith Library), College of Physicians and Surgeons, Vancouver, is developing an Archive of Medicine for British Columbia, dealing with all aspects of medicine and the health sciences in the province. There are about 2,000 items of biography. manuscripts, photographs, clippings, minute books, programmes, and memorabilia.

Medicine

Tables II-VII of Simon's *Library Support of Medical Education and Research in Canada* summarize statistically, as of 1962, the holdings of 12 university medical libraries in total volumes (serials and monographs separately), bio-medical collections, current serials, subscriptions to journals included in *Index Medicus* by subjects, Canadian and foreign periodicals coverage, and bibliographic services and review journals.

The Academy of Medicine Library, Toronto, maintains a collection of 50,000 volumes, divided about equally between textbooks and periodicals for clinical medicine. The library also has more than 4,000 volumes of rare and historical books and manuscripts, including early works relating to pediatrics and pathology. There are special collections for pediatrics, pathology, rheumatic diseases, and hematology. Current periodicals number 825.

University medical libraries exceeding 20,000 volumes in size for medicine and allied fields are the following:

TORONTO, 115,890 volumes: specialization in cardio-vascular diseases, pediatrics, diabetes, obstetrics, and gynecology.
WESTERN ONTARIO, 74,050 volumes: specialities in various areas.
BRITISH COLUMBIA, 65,430 volumes.
MONTRÉAL, 70,400 volumes.
MANITOBA, 44,672 volumes.
ALBERTA, 36,710 volumes.
DALHOUSIE, 36,000 volumes.
QUEEN'S, 31,296 volumes.
MCGILL, 30,775 volumes.
SASKATCHEWAN, 22,972 volumes

Medieval History

Williams' study in 1962 found the strongest collections in medieval history in Toronto, at the Pontifical Institute of Mediaeval Studies and University of Toronto; in Montreal at the Institut d'Etudes Médiévales Albert-le-Grand of the Université de Montréal; and at the University of Ottawa.

The Institut d'Etudes Médiévales in Montreal, founded in 1942 by the Dominican Fathers, is especially strong in medieval history and has a good collection of Greek and Latin literature. The coverage includes medieval philosophy, Aristotle, Judaism, Christian literature, theology, liturgy, church history, canon law, civil law, sacred writings, history, education and learning, fine arts, paleography, and bibliography of the field. The collection of monumental sets and periodical files is excellent.

Meteorology

The Meteorological Services of Canada, Toronto, holds 7,000 books, 140 periodical files, and other materials relating to meteorology, climatology, and oceanography. Meteorological records are available for Toronto since 1839, from Canada since 1873, and from many countries of the world.

Military Science

The Department of National Defence Departmental Library, Ottawa, deals with military art and science (3,102 volumes), naval art and science (1,501 volumes), European War, 1914-18 (1,501 volumes), World War II, 1939-45 (2,136 volumes), and anything associated with military Canadiana. The Library contains 50,000 volumes and receives 760 periodicals.

The Royal Military College of Canada Library, Kingston, has 12,000 volumes relating to military studies—army, navy, and air force. The Library also holds 12,000 volumes of military history, art, and science in German.

The Collège Militaire Royal de St-Jean, P.Q., reports 3,500 volumes on military and naval science, emphasizing strategy, tactics, philosophy and modern war.

McGill noted a collection of 3,025 volumes in this field, a good proportion of historical interest.

Milton, John

A check of the basic Milton bibliographies revealed that Toronto holds about 90 percent of the titles recorded.

Mining

The Mines Branch Library of the Mines and Technical Surveys Department, Ottawa, holds 70,000 volumes and receives 1,400 current periodicals relating to the science and technology of mining, metallurgy, fuels, explosives, ceramics, mineral economics, and technical applications of chemistry and physics.

The Ontario Department of Mines Library, Toronto, has 35,000 volumes, 8,500 maps, etc., dealing with geology, mineralogy, mining engineering, and metallurgy.

Montreal History

The Library of the Ecole des Hautes Etudes Commerciales houses the rich collection of books and manuscripts of the Societé historique de Montréal.

Motion Pictures

The Canadian Film Institute Library, Ottawa, has 2,000 volumes, 200 current periodicals, and extensive vertical files on all aspects of the film and motion picture industry, including censorship, festivals, societies, etc.

Municipal Government

The Ontario Department of Municipal Affairs, Toronto, maintains a library of 20,000 volumes, 1,200 maps, 200 current periodicals, etc., concerning municipal government, finance and assessment, and town planning.

Music

The Toronto Public Library's Music Division holds 5,000 books, 20,000 scores, 5,000 recordings, etc. There are special collections of music by Canadian composers, folk songs, orchestral and chamber music scores.

The University of Toronto has 24,031 volumes of monographs, periodicals and microtexts classifying in music; 231 current periodicals; 43,100 recordings; and 6,159 vocal and orchestral scores. There are 530 volumes of rare books.

Laval's music collection numbers about 21,000 volumes and pieces. McGill reported 11,150 volumes, 3,200 volumes of scores, and 5,000 recordings; there is some specialization in 16th century music. British Columbia holds 9,100 volumes and 11,000 recordings in the field.

Napoleon Bonaparte

The McGill University Library has about 4,000 volumes and 1,200 contemporary prints on the Emperor and his time.

National Defence

The Department of National Defence, Canadian Army Staff College, Fort Frontenac, Kingston, Ontario, Library is concerned with international relations, military art and science, history, politics, and economics. The collection numbers 40,000 volumes.

The Defence Research Board's Defence Chemical Biological Radiation Laboratories Library, Ottawa, holds 2,000 volumes, 80,000 documents, and other materials in chemistry, biology, and physics, with emphasis on defence applications.

Near East

Williams found that "Toronto has a long-established and excellent collection on the ancient languages and literatures of the area, with particular strength in Akkadian, Aramaic (including Syriac), Egyptian and classical Hebrew. Coptic, Egyptian, Sumerian, Hellenistic Greek, and pre-Islamic Arabic are also covered."

New Brunswick History

The New Brunswick Legislative Library, Fredericton, founded in 1841, has about 38,000 volumes, emphasizing New Brunswick material, early books of description and travel, and official publications.

The University of New Brunswick has a special collection of books, pamphlets, and manuscripts relating to New Brunswick and the Maritime Provinces. There are extensive files of New Brunswick newspapers from the end of the 18th century to date.

The New Brunswick Museum Library, St. John, holds the Ganong Library of New Brunswickana, containing about 3,500 volumes.

Newspapers

The Canadian Library Association has sponsored the microfilming of over 300 Canadian newspaper files, and maintains a collection of master negatives.

The Library of Parliament's newspaper collection begins with 1766; the older material is principally from Ontario, Quebec, and the Maritimes. There are 995 titles currently received and 40 are retained on microfilm. The bound collection numbers 7,200 volumes.

The Centre de Documentation des Lettres Canadiennes Françaises, Université de Montréal, is filming about 175 Quebec Province newspapers, and publishing a subject index.

An indexing of Canadian news from 15 Canadian daily newspapers is in progress at the University of Saskatchewan, Regina campus.

The Saskatchewan Legislative Library preserves in bound form all Saskatchewan dailies and microfilms (beginning in 1943) all weeklies.

The Vancouver Public Library has microfilms (395 reels) and bound files (105 volumes) of Canadian Northwest newspapers for the period 1858 to 1959.

The Toronto Public Library is reported to have an excellent collection of Toronto newspapers.

Among the university libraries, Alberta subscribes for 121 titles, covering Canada, U.S., Europe, Africa, Asia, Australasia, and Latin America. Scattered files go back into the 18th century, mainly on film.

British Columbia receives 109 titles from Europe, Asia, Africa, Australia, United States, and Canada. Files cover 18th century to date. Ten papers are currently being preserved on film.

Laval receives 77 papers currently, chiefly from Quebec, Toronto, London, Paris, and New York. The oldest title is dated 1764. The Library receives the papers microfilmed by the Canadian Library Association, and preserves major foreign titles on film.

McGill receives 140 titles in its various libraries and 52 are preserved. Canadian and British files date from 1785. The CLA newspaper films are received. Twelve foreign countries are represented in the Library's holdings.

McMaster subscribes to the CLA Canadian newspapers on microfilm project (115 titles), and preserves 24 other papers received.

Because of the large filming and indexing project there, Montreal receives about 580 titles; 3,000 reels of film are on hand. Quebec newspapers are completely covered currently.

Manitoba receives and preserves 24 Slavic and Icelandic papers currently.

New Brunswick has microfilm files of 32 newspapers, the oldest dated 1785; the Maritime Provinces, especially New Brunswick, form the bulk of the collection.

Queen's receives 86 Canadian and foreign newspapers currently, and has files on microfilm back to 1778. Twenty foreign countries are represented in the holdings. The microfilmed papers include 135 titles, many of early date.

Saskatchewan receives and preserves 56 titles. Retrospective files on film include 12 titles, the earliest 1764. Bound files number 2,400 volumes.

Toronto currently is filming 21 foreign newspapers and subscribes to all microfilms produced by the CLA project Canadian Newspapers on Microfilm for the historical items.

Western Ontario maintains a large and expanding collection of Canadian newspapers, with emphasis on those of Western Ontario. In original form, its Ontario files begin with 1841. All titles filmed by the CLA project are received on standing order, and other films not covered by CLA are purchased.

Windsor's newspaper collection represents Canada, Rome, Paris, New York, London, Manchester, Detroit, and Bonn. The Library is a subscriber to the CLA microfilming project. Retrospective files on film represent 37 titles, beginning in 1785.

Nova Scotia History

The Nova Scotia Legislative Library, Halifax, holds 5,000 volumes on Nova Scotia from its earliest history to the present time.

The Nova Scotia Public Archives, Halifax, holds the Province's public records for executive, legislative, and judicial functions, and also extensive supplementing materials, such as letters, diaries, and other personal or family papers; minute books of clubs and societies; business account books and correspondence; charts, maps, and photographs. The Akins collection holds 4,000 volumes on early Colonial and Canadian history. The Archives Library proper contains more than 25,000 books and pamphlets relating to Nova Scotia or written by Nova Scotians.

Dalhousie University Library's Morse collection of documents, letters, rare books, early Canadiana, maps, and paintings deals mainly with the history of Nova Scotia.

Nursing

The largest collection reported in the field of nursing is at McGill, with 12,310 volumes. Ottawa holds 6,000 volumes, Western Ontario's collection totals 3,750 volumes, and Alberta's, 2,500 volumes.

The Canadian Nurses' Association Library, Ottawa, has a collection of 2,000 volumes and 180 current periodicals relating to nursing, preclinical sciences, and health services.

Ontario History

The University of Western Ontario Library maintains a regional collection of manuscript and printed material on the history and development of the 14 counties of southwestern Ontario.

The Ottawa Public Library has a collection of books and pamphlets written by Ottawa authors or written about Ottawa.

Patents

The Library and Public Search Room of the Patent and Copyright Office, Department of Secretary of State, Ottawa, holds 60,000 volumes and 5,000,000 documents containing patents of the world, especially for Canada, U.S., Western Europe, and Japan.

Personnel Administration

The Civil Service Commission of Canada Library, Ottawa, has 5,000 volumes and 125 current periodicals on public administration, with special relation to public personnel management.

Philosophy

Williams, in 1962, found six libraries with "relatively strong collections in philosophy": Toronto, Ottawa, British Columbia, Montréal, McGill, and Queen's. Including the holdings of the Pontifical Institute of Mediaeval Studies, the city of Toronto was considered to have "a substantial lead over others in the country." Each institution had areas of special strength. Laval was found to be strong in scholastic philosophy and New Brunswick in modern logic and epistemology.

The University of Toronto Library is notably strong in the history of philosophy, ancient and medieval philosophy, medieval Arabic philosophy, and for Erasmus, Nietzsche, Schopenhauer, Hume, and Spinoza. The collection totals 10,800 volumes. Nearby, the Pontifical Institute of Mediaeval Studies holds 10,000 volumes emphasizing ancient and medieval philosophy and philosophers.

In Ottawa, the philosophy collections of the University of Ottawa and the University of St. Paul are outstanding; the combined holdings are about 50,000 volumes, covering all periods; 600 periodicals are current.

Montréal's collection of 12,500 volumes is oriented toward ancient, medieval, and scholastic philosophy, because of the presence of the Institut d'Etudes Médiévales there.

McGill's collection of 12,500 volumes is comprehensive in scope, with some stress on Hume, Kant, Descartes, and Hegel. Laval reports 12,000 volumes, centered on Aristotle, Plato, and Thomas Aquinas, though modern philosophy is well represented. British Columbia, with 7,218 volumes, has metaphysics, epistemology, logic, contemporary analytic, and ethics as fields of interest, with stress on Plato, Aristotle, Descartes, Spinoza, Leibniz, and Kant.

Queen's holds 10,929 volumes, emphasizing ethics and metaphysics, Kant and Plato; all periods are covered adequately. There are also good working collections at McMaster (7,146 volumes), Western Ontario (8,000 volumes), Dalhousie (6,000 volumes), and Carleton (5,000 volumes).

Photographs

The National Film Board Photo Library, Ottawa, has a collection of more than 200,000 photographs illustrating the cultural, social, economic, anl geographic sectors of Canada.

Physics

Only seven university collections of physical literature exceeding 5,000 volumes each were reported: Toronto, 15,200; McGill, 11,575; Laval, 6,000; British Columbia, 5,700; and Dalhousie, McMaster, and Queen's about 5,000 volumes each.

The largest collection, Toronto's, has the following special fields of interest: high energy physics, solid state physics, atomic and molecular physics, low temperature physics, theoretical physics, and electromagnetic theory.

Political Science

The Library of Parliament, Ottawa, holds 425,000 volumes and extensive collections of other materials, with emphasis on Canadian, parliamentary, and current international affairs, law, history, and economics. In political science proper it has about 30,000 volumes. Special fields of interest include public finance, legislatures and legislation, political parties, political systems, constitutions, municipal government, and administrative management. There is particular strength for Canadian government and politics, federal and provincial, but France, the United Kingdom, Commonwealth countries, and the U.S. are well covered.

British Columbia has 23,400 volumes classifying in political science, including 16,800 periodical volumes. Special fields of interest are 19th century politics and government and political thought, especially Canadian, French, and post-1900 French.

Montréal's Ecole des Hautes Etudes Commerciales reports about 25,000 volumes, emphasizing Canadian governmental affairs.

McGill's collection of 19,200 volumes has several specialities: national constitutions and institutions, national and city politics, political systems, and national administration.

Toronto, with 16,000 volumes, has a special interest in the history of political ideas and thought, especially in Canada and Britain.

Other collections above 10,000 volumes in size are at Carleton (12,000 volumes); Queen's (10,000 volumes), supplemented by 10,672 volumes in the Law Library dealing with international relations; Laval and Dalhousie (each with about 10,000 volumes).

Polymer Science

The University of Waterloo Library, aided by industry grants, is developing a specialized research library in polymer science.

Portuguese Literature

The University of Waterloo Library has recently acquired an important collection of Portuguese literature, consisting of several thousand items, strong in 19th and 20th century literature, bibliography, ethnography, art, history of the Portuguese Empire, etc.

Postal Service

The Post Office Department Reference Library, Ottawa, has a collection of 8,000 volumes on postal acts, regulations, and reports, Canadian and foreign.

Printing

The Toronto Public Library has a special collection of fine printing for all periods. For a sampling, see *One Hundred Books Since 1471; an Exhibition of Fine Printing from the Collections of the Toronto Public Library*, 1967.

Mount Saint Vincent University Library has a special collection of about 5,000 volumes of fine bindings, special editions, private press editions, limited editions, first editions, examples of the work of famous illustrators, and several incunabula.

The University of Saskatchewan Library, Regina, has 10,000 items on printing and publishing, from incunabula to the 20th century.

The William Colgate printing collection at McGill contains 5,000 volumes and 40 periodicals on printing techniques, type specimens, and examples of fine printing. There is also a collection of printed ephemera.

Psychology

According to Williams' ratings in 1962, "McGill appears to have Canada's strongest collection in psychology . . . the University of Ottawa appears to be slightly stronger than Toronto in both serial and monograph holdings" (with particular strength in clinical and educational psychology); "Toronto's collection is strong in developmental psychology and learning, but weak in other areas; and the Université de Montréal is strong in French psychology."

By volume count, as reported, Toronto has 8,144 volumes; McGill, 6,325; Windsor, 6,000; Dalhousie, 5,000; Ottawa, 5,000; and Carleton, 4,000 volumes.

Public Welfare

The Canadian Welfare Council Library, Ottawa, has a collection of 14,000 volumes, 3,500 pamphlets, and 165 current periodicals dealing with public welfare, social service, charities, and community organization.

Puppets

The Stearn marionette collection, McGill University, consists of 750 volumes on the puppet theatre, together with a collection of ancient and modern puppets.

Quebec History

The Archives of Quebec Library covers the history of New France, Quebec, and Canada; the history of the U.S., Great Britain, and France as it relates to Canada; regional and local history of Quebec and of other areas of Canada inhabited by French Canadians; Canadian genealogy and biography; Canadian bibliography and geography; and French-Canadian literature. The collection of 30,000 volumes includes books, periodicals, pamphlets, and government publications.

Recordings

British Columbia has 11,000 disc recordings—music, speech, ethnic folk music, jazz, etc.

The University of Toronto reports 43,100 music recordings.

Religion

Canadian university libraries hold a number of major collections in religion and theology. In Ottawa, the combined holdings of the University of Ottawa and the University St. Paul total 100,000 volumes. In Toronto, the collections centering around the University of Toronto—Victoria University, St. Michael's, and the Pontifical Institute of Mediaeval Studies—are of outstanding significance. In Montreal, there are the important collections at the Université de Montréal and its Institut d'Etudes Médiévales, and McGill's 40,000 volume collection. McGill has acquired recently the 20,000 volume library of the Montreal Diocesan Theological College, strong for patristic study, liturgies, ecclesiastical history and biography.

Other good collections in the field of religion are to be found at Queen's with 27,481 volumes strong for 19th century English and Scottish Methodism and Presbyterianism and Canadian Presbyterianism, and for contemporary Christian theology; at McMaster, with 22,872 volumes, and strength for Baptist materials; and Laval, holding 33,000 volumes, with some specialization for the history of Christianity, the Roman Catholic Church, and contemporary Christian theology.

The Facultates Ecclesiasticae Sapientiae Library, Ottawa, holds 135,000 volumes relating to the Bible, theology, canon law, church history, religious sciences, and philosophy. Various monumental sets are present, such as Migne's *Patrolgia Latina* and *Graeca* and the *Monumenta Germaniae Historica.*

The Scolasticat des Pères Jésuites, Montreal, has a library of 120,000 volumes, subscribes to 400 periodicals, and adds 3,200 volumes annually. The collection is strong in canon law, civil law, church history, and the history of science.

Rilke, Rainer Maria

The McGill University Library holds all first editions of Rilke, important subsequent editions, and commentaries, a total of 250 volumes.

Romance Literature and Languages

No large Italian, Portuguese, or Spanish language and literature collections were reported. Those at Toronto, totaling 22,729 volumes, are most noteworthy; the holdings include the significant periodicals and society publications in the field, and an important collection of 700 Italian Renaissance plays. Spanish is also well represented for periodicals and society publications. In books, the Golden Age is strongest, with emphasi[illegible]n Cervantes and Lope de Vega. A bibliography of the Library's collection of 800 Comedias Sueltas has been published.

McGill and Queen's each has a collection of about 8,000 volumes of Italian and Spanish works. Queen's notes specialized collections of significance for Dante, Cervantes, and Lope de Vega; its files of periodicals and society publications are good.

British Columbia holds 4,940 volumes for Spanish and 1,845 volumes of Italian literature, with no particular specialization.

Rousseau, Jean Jacques

The McGill University Library has most of the early editions of Rousseau and works about him, a total of 450 volumes; and 20 original letters. The Rousseau collection at Toronto is also reported to be excellent.

St. Lawrence Seaway

The Lakehead University Library is developing a collection relating to the St. Lawrence Seaway; about 300 items have been assembled to date.

Saskatchewan History

The Saskatchewan Archives, at Saskatoon and Regina, contains both official and private materials. Included are papers of former premiers and cabinet ministers; diaries, reminiscences, photographs, letters of early settlers; records of municipal councils, school districts, and agricultural societies; and homestead files.

Science

The National Science Library, Ottawa, holds 600,000 volumes, 125,000 microforms, and 12,000 current periodicals covering most fields of science and technology. The exceptions, e.g., agriculture, geology, mining, and medicine, are found in departmental libraries. The National Science Library is a depository for atomic energy reports, Canadian and foreign.

Tables 5A-5B of Bonn's *Science-Technology Literature Resources in Canada,* p. 36-37, present statistically the "Libraries With Most Journals Per Subject Area" and "Libraries With Most Journals in Each Category of Science-Technology," the first under LC classes and the latter under six broad headings. Appendices, p. 71-80, are figures on holdings of indexing and abstracting services and current journals, arranged by LC classes.

The Defence Research Board's Directorate of Scientific Information Services, Ottawa, has 15,000 volumes, 360,000 documents, and 70,000 microforms classifying in science, technology, and psychology with emphasis on military applications.

The Ontario Research Foundation Library, Sheridan Park, Ontario, has 14,000 volumes of books and periodicals and receives 500 current periodicals of scientific and technical literature, emphasizing applied microbiology, chemistry, engineering, metallurgy, physiography, physics, and textiles.

Scotland

The Saint Francis Xavier Library has a special collection relating to Scotland and Scottish immigrants who came to Canada, especially to Nova Scotia.

Slavic History and Literature

Williams noted that "British Columbia clearly has the strongest Canadian collection of history of the Slavic peoples and other nations of Eastern Europe." The collection's scope includes Russia, Poland, Czechoslovakia, Austria, Hungary, Bulgaria, Albania, Rumania, and Yugoslavia. At Toronto, Ukranian, Serbo-Croatian, and Russian history was found to be well represented.

Since the Williams study, Toronto's Slavic collection has gone through a major expansion and presently totals more than 40,000 volumes.

Alberta's Gonsett collection contains 6,270 volumes of Slavic literature, strong for 19th and 20th century Russian literature and 11th to 13th century Ukranian literature. The Slavonic linguistics section is also well developed.

Western Ontario, aided by Canada Council grants, for the past several years has carried on a systematic programme of acquisition for Russian and other Slavic materials, covering broadly the field of history, literature, and a number of social sciences.

Montréal's 8,000 volume Slavic collection contains works in Polish, Russian, Czech, Slovak, and Bulgarian.

A national "Survey of Slavic Resources in Canadian Libraries" is nearing completion in the Université de Sherbrooke Library.

Social Welfare

The School of Social Welfare Library, Saint Patrick's College, Ottawa, has 8,000 volumes and 107 current periodicals relating to social welfare and mental health.

Sociology

Toronto holds 12,793 volumes relating to sociology with particular strength in periodical holdings.

Standards

The Canadian Standards Association Library, Ottawa, holds 80,000 standards published in 44 countries.

Statistics

The Dominion Bureau of Statistics Library, Ottawa, holds 5,000 volumes, more than 100,000 documents, and 1,500 current periodicals dealing with statistics, census and population, Canadian and foreign.

Steel

The Steel Company of Canada Library, Hamilton, has 5,000 volumes, 360 current periodicals, etc., dealing with steel metallurgy.

Taxation

The Department of National Revenue, Ottawa, has two libraries: Customs and Excise Division Library of 8,200 volumes, and Taxation Division's Legal Library, the two dealing with customs and excise, taxation, tariffs, income tax and estate tax laws, law reports and tax cases.

Technology

The Vancouver Public Library holds 95 percent of publications included in the *Applied Science and Technology Index,* 20 percent of the *British Technology Index* and 15 percent of those in the *Engineering Index.*

Telegraphy

Queen's University Library has a collection of some 850 books, journals, etc., relating to the early history of telegraphy, telephony, and radio.

Theatre

The Toronto Public Library's Theatre and Drama Section has 12,000 books, current periodicals, and an extensive collection of ephemeral materials relating to theatre and drama, film, dance, radio and television.

The University of Toronto has 2,000 monographs on the history of the theatre, stage settings and costumes, etc. The Library also receives 30 periodicals relating to the performing arts.

Alberta has 2,130 titles on the theatre, drama, radio and television broadcasting, and cinema, also a special collection of Canadian plays.

Transportation

The Department of Transport Library, Ottawa, holds 65,000 volumes and receives 315 current periodicals relating to marine and rail transportation, civil aviation, telecommunications, aids to navigation, building, traffic, harbours, and waterways.

The Ontario Department of Transport Library, Toronto, has more than 6,000 volumes and other materials relating to transportation; urban and regional planning; safety and road research; highway finance, and other aspects of the field.

The Law Library Branch of the Board of Transport Commissioners for Canada, Ottawa, has 5,000 volumes dealing with transportation and communications, such as railways, inland shipping, and telegraph and telephone companies.

Ukrainian Literature

The University of Alberta Library has an extensive collection of works in Ukrainian and by and about Ukrainians.

Unemployment

The Unemployment Commission Library, Ottawa, has 3,000 volumes and 500 current periodicals relating to unemployment insurance, social security, occupations, personnel management, vocational training, industrial relations, and economics.

Veterinary Medicine

The Department of Agriculture's Animal Diseases Research Institute Library, Hull, Quebec, holds 7,000 volumes, 9,000 pamphlets, and receives 140 periodicals dealing with veterinary medicine, parasitology, and pathology.

Wesleyana

The Victoria University Library, Toronto, has a special Wesley collection of 600 volumes.

Women

Mount Saint Vincent University Library is developing a research collection of books by and about women.

Wood

The Forestry Department's Forest Products Laboratory Library, Ottawa, holds 20,000 volumes, 65,000 documents and pamphlets, and 220 current periodicals, specializing in the scientific aspects and industrial uses of wood and forest products.

Appendix A

BIBLIOGRAPHICAL REFERENCES TO CANADIAN LIBRARY RESOURCES

Acadia University Library. *A catalogue of the Maritime Baptist Historical Collection in the Library of Acadia University.* Kentville, N.S.: Kentville Pub. Co., 1955. 44 p.

Detailed listing by types of material, kinds of activities, and by provinces of Canada.

Alberta, University, Library. *Bibliographies (national and trade) available in the Cameron Library.* Edmonton: The University, 1965. 65 p. Supplement. 26 p.

Arranged by countries.

Alberta, University Library. *The Dr. A. C. Rutherford Canadiana Collection. Part I, Western Americana to 1915.* Edmonton: The Library, 1967. 63 p. (News from the Rare Book Room, 2 (March 1967), No. 3).

Alphabetical list of about 550 titles. Three additional sections to be published: exploration and voyages, general Canadiana, and regional and local history.

Alberta, University, Library. *News from the Rare Book Room.*

A periodical publication containing bibliographies, descriptions, and news notes about Alberta's rare book holdings.

Ash, Lee. *The scope of Toronto's Central Library; a review of the nature of the book resources of the Central Library Division.* Toronto: Toronto Public Library, 1967. 149 p.

"An analysis of the Central Library's collections arranged by the Dewey Decimal Classification."

Ash, Lee. *Subject collections: a guide to special book collections and subject emphases as reported by university, college, public, and special libraries in the United States and Canada,* 2d ed. N.Y.: R. R. Bowker, 1961. 651 p.

Bishop, Olga Bernice. *Publications of the governments of Nova Scotia, Prince Edward Island, New Brunswick, 1758-1952.* Ottawa: National Library of Canada, 1957. 237 p.

"For a few works which were readily available in only one library, a location is given." Based on collections of University of Western Ontario, Ontario Legislative Library, and Public Archives of Canada.

Bishop's University. *Catalogue of the Eastern Townships historical collection in the John Bassett Memorial Library*. Lennoxville, Que., 1965. 38 p.

Mainly printed materials, including some general Canadiana which deals in part with Eastern Townships history or topography.

Blackburn, Robert H. *A joint catalogue of the serials in the libraries of the City of Toronto,* 5th ed. Toronto: Univ. of Toronto Press, 1953. 602 p.

Includes holdings of University of Toronto and 26 other libraries.

Bonn, George S. *Science-technology literature resources in Canada; report of a survey*. Ottawa: Associate Committee on Scientific Information, National Research Council, 1966. 80 p.

Contains statistical summaries of library holdings of journals, and of indexing and abstracting services.

British Columbia, University, Library. *A check list of printed materials relating to French Canadian literature*. Vancouver, 1958. 93 p.

Lists novels, poetry, drama, short stories, chronicles, literary criticism, biographies, oratory, travel, and folklore.

Brown, Jack E. "The National Science Library, information centre for industry." *Industrial Canada,* 65 (March 1965), 1-7.

General description of holdings and services.

Buchanan, Milton A. *A catalogue of Spanish periodicals in Toronto*. Toronto: Univ. of Toronto Press, 1941. 20 p.

A list of University of Toronto Library's holdings.

Canada Bureau of Statistics Library. *Bibliographical list of references to Canadian railways, 1829-1938*. Ottawa, 1938. 99 p.

Canada Department of Agriculture. *Catalogue of the Buller Memorial Library,* comp. by Kent D. Oliver. Ottawa: Queen's Printer, 1965. 84 p.

Relates primarily to botany. Personal library of A. H. R. Buller, maintained intact at Canada Dept. of Agriculture Research Station, Winnipeg.

Canada Department of Labour. *Canadian labour papers on microfilm in Department of Labour Library*. Ottawa: The Department, 1965. 12 p.

Canada Department of Labour. *Periodicals currently received in Department of Labour Library*. Ottawa, 1966. 23 p. (Bulletin No. 12 revised).

Canada Geological Survey. *Publications of the Geological Survey of Canada (1917-1952)*, comp. by Lorne B. Leafloor. Ottawa: Cloutier, 1952. 82 p.

Supplements Survey's *Annotated catalogue of and guide to the publications of the Geological Survey of Canada,* 1845-1917. Ottawa: Taché, 1920. 544 p.

Canadian Library Association. *Canadian newspapers microfilmed by the CLA and other producers.* Ottawa, 1964. 68 p.

More than 800 papers listed geographically under province and place of publication, with index of titles. Holders of negatives noted.

Canadian Library Association. *Special collections in Canadian Libraries.* Ottawa: The Association, 1967. n.p.

Describes collections in detail, in various locations, dealing with East Asia, Celtic literature, Canadiana, Islamic studies, Punjabi language, private press imprints, and Acadian archives.

Canadiana. Ottawa: National Library of Canada, 1953—

Annual; based on copyright deposits and other publications received by the National Library.

Carleton University Library. *Periodicals list, 1966-67.* Ottawa: The Library, 1966. 117 p.

Alphabetical, with holdings.

Carleton University Library. *Selected list of current materials on Canadian public administration and political science.* Ottawa: The Library, 1965. 42 p. Classified arrangement.

Corley, Nora T. "The Arctic Institute of North America." Special Libraries Association, Geography and Map Division, *Bulletin,* No. 57 (Sept. 1964), 12-16.

Describes resources and services of the Institute's Library.

Dalhousie University Library. *Rudyard Kipling; a bibliographical catalogue,* by James Mc G. Stewart, ed. by A. W. Yeats. Toronto: Dalhousie University Press and University of Toronto Press, 1959. 673 p.

A partial checklist of the major Kipling collection in the Dalhousie University Library. Detailed bibliographical descriptions and index.

Freer, Katherine May. *Vancouver; a bibliography compiled from material in the Vancouver Public Library and the special collections of the University of British Columbia.* Vancouver: Vancouver Public Library, 1962. 234 1.

Gagnon, Philéas. *Essai de bibliographie Canadienne; inventaire d'une bibliothèque comprenant imprimés, manuscrits, estampes, etc., relatifs à l'histoire du Canada et des pays adjacents.* Québec; The author, 1895-1913. 2 v.

Collection acquired in 1909 by the city of Montreal for public library.

Goff, Frederick R. *Incunabula in American libraries; a third census of fifteenth-century books recorded in North American libraries.* N.Y.: Bibliographical Society of America, 1964. 798 p.

Records locations in Canadian libraries.

Hale, Richard W. *Guide to photocopied historical materials in the United States and Canada.* Ithaca, N.Y.: Cornell University Press, 1961. 241 p.

Locates copies in 18 Canadian institutions.

Hills, Margaret Thorndike. *The English Bible in America; a bibliography of editions of the Bible and the New Testament published in America, 1777-1957.* N.Y.: American Bible Society and the New York Public Library, 1961. 477 p.

Chronological listing of Bibles published in the U.S. and Canada, with locations.

Institut Canadien de Québec. Bibliothèque. *Catalogue, 1898.* Québec. Dussault & Proulx, 1898. 315 p. Supplement, 1903. Québec: H. Chassé 1903. 136 p.

Kruzas, Anthony T. *Directory of special libraries and information centers.* Detroit: Gale Research Co., 1963. 767 p.

Special libraries in Canada, p. 641-95.

Laval, Université, Bibliothèque. *Liste des principaux atlas régionaux de la cartothèque de l'Université Laval.* 2d ed. 10 p.

Librarian's guide to Metropolitan Toronto. Toronto: Local arrangements committee of the CLA-ACB conference, 1965. 56 p.

Directory, with brief notes, of public, special and institutional, university and college libraries.

Library Association of Ottawa, Directory Committee. *Directory of libraries in Ottawa.* Ottawa: Carleton University Library, 1966. 111 p.

Includes all types of libraries with detailed data on each.

Library of Parliament. *Newspapers and periodicals currently received by the Library of Parliament, including the Reading Room of the House of Commons.* 1965. 50 p.

Canadian newspapers arranged by provinces, others by country; periodicals alphabetically.

McGill University Library. *A catalogue of the William Colgate printing collection; books, pamphlets, drawings.* Montreal, 1956. 25 p. (Special collections II)

McGill University Library. *A dictionary catalogue of the Blacker-Wood Library of Zoology and Anthropology.* Boston: G. K. Hall Co., 1966. 8 v.

A collection of 60,000 volmes.

McGill University Library. *European and American manuscripts.* Montreal, 1962. n.p. (Special Collections I)

Calendar of manuscripts for Canadian history (315 groups or individual items); non-Canadian history (153 entries); Canadian miscellany (67 entries); non-Canadian miscellany (236 entries); and index of names.

McGill University Library. *The Rosalynde Stearn puppet collection.* Montreal, 1961. n.p. (Special Collections IV).

McMaster University, Mills Memorial Library. *Serials currently received.* Hamilton, Ont., 1963. 215 p.

Revised edition issued in 1965 in two parts: science and humanities and social sciences.

Mount Allison University Library. *Serial holdings in Mount Allison University Library, August 1966.* Sackville, N.B.: The University, 1966. 143 p.

Alphabetical list, largely excluding government publications.

National Gallery of Canada Library. *Canadian collection author catalogue.* Ottawa, 1965. n.p.

Catalogue cards reproduced by photo-offset process.

National Research Council Library. *Union list of scientific serials in Canadian libraries.* Ottawa, 1957. 805 p.

Lists holdings of 140 libraries for more than 21,000 titles in science and technology. *Supplement,* 1957-1959. Ottawa, 1960. 290 p.

National Science Library. *Abstracting and indexing services held by the National Science Library.* Ottawa: The Library, 1966. 39 p.

Alphabetical list, with holdings.

National Science Library. *English translations of Russian journals held by the National Science Library.* Ottawa: The Library, 1964. 40 p.

Alphabetical list, with holdings.

National Science Library. *Russian journals held by the National Research Council Library, National Science Library.* Ottawa: The Library, 1964. 40 p.

Alphabetical list, with holdings.

National Science Library. *Serial publications in the Library, September 1966.*

Computer-produced, alphabetical list in two volumes, 1,064 p.

National Science Library. *Union list of scientific serials in Canadian libraries,* 2d ed. Ottawa: The Library, 1967. 2 v.

Covers science, technology, and medicine. Includes holdings of 198 libraries, 38,000 titles. Computer produced and holdings of an individual library can be printed out.

National union catalog; a cumulative author list representing Library of Congress printed cards and titles reported by other American libraries. Washington: Library of Congress, 1953 to date.

Includes locations in 109 Canadian libraries.

New Brunswick Legislative Library. *New Brunswick government documents; a checklist of New Brunswick government documents received at the Legislative Library, 1955 to date.* Annual. Fredericton, 1955—.

New Brunswick, University, Library. *A catalogue of the Rufus Hathaway collection of Canadian literature, University of New Brunswick.* Fredericton, 1935. 53 p.

New Brunswick, University, Library. *Periodical holdings in science and applied science and technology.* Fredericton, N.B., 1965. (various paging).

Grouped by subject fields.

New serial titles, 1950-1960; supplement to the Union list of serials, third edition; a union list of serials commencing publication after December 21, 1949. Wash.: Library of Congress, 1961. 2 v. Continued by 1964 Cumulation. Wash.: Library of Congress, 1965. 2v., and monthly supplements.

Lists holdings of about 120 Canadian libraries.

Nova Scotia Public Archives, *Calendar of official correspondence and legislative papers, Nova Scotia, 1802-15,* comp. by Margaret Ells. Halifax, N.S., 1936. 354 p.

Nova Scotia Public Archives. *A calendar of the White collection of manuscripts in the Public Archives of Nova Scotia,* by Margaret Ells. Halifax, 1940. 30 p. (Public Archives of Nova Scotia, Publication No. 5)

Nova Scotia Public Archives. *A catalogue of maps, plans, and charts in the Public Archives of Nova Scotia,* comp. by Marion Gilroy. Halifax, N.S., 1938. 95 p. (Bulletin, v. 1, No. 3).

Nova Scotia Public Archives. *A catalogue of the Akins collection of books and pamphlets.* Halifax: 1933. 206 p.

Records 4,000 volumes on early colonial and Canadian history.

Nova Scotia Technical College. *Library holdings of serial publications,* 2d ed. Halifax, 1966. 94 p. Processed.

Current and non-current titles, with record of holdings.

Ontario Legislative Library. *Bi-monthly booklist.* Toronto: The Library.

Alphabetical list of accessions, issued six times annually.

Ontario Universities Library Project. *Author-title catalogue; cumulated up to December 1965.* Toronto: Univ. of Toronto Library, 1966. 3 v. Annual author-title supplements. 1966. 3 v. Subject catalogue, 1966-67. 4 v.

Selection of books for 5 new colleges affiliated with University of Toronto; 35,000 titles, 45,000 volumes.

Osler, William. *Bibliotheca Osleriana; a catalogue of books illustrating the history of medicine and science, collected, arranged by Sir William Osler . . . bequeathed to McGill University*. Oxford: Clarendon Pr., 1929. 785 p.

Ottawa, University, Vanier Library. *List of Serials*. Ottawa: The Library, 1967. 125 p.

Alphabetical list showing holdings.

Peel, Bruce B. *A bibliography of the Prairie Provinces to 1953*. Toronto; Univ. of Toronto Press, 1956. 680 p. Supplement, 1963.

Lists 2,769 items, often briefly annotated, with subject, title, and author indexes. Locates copies in various libraries.

Philadelphia Bibliographical Center and Union Library Catalogue. *Union list of microfilms*. Ann Arbor, Mich.: J. W. Edwards, 1951. 1,961 cols. *Supplement*, 1949-1952. Ann Arbor: J. W. Edwards, 1953. 995 cols.

Reports accessions of several hundred co-operating libraries in U.S. and Canada.

Poleman, Horace I. *A census of Indic manuscripts in the United States and Canada*. New Haven: American Oriental Society, 1938. 542 p.

Locations in 12 Canadian libraries, mainly universities.

Priestley, F. E. L. *The humanities in Canada; a report prepared for the Humanities Research Council of Canada*. Toronto: Univ. of Toronto Press, 1964. 246 p.

"Special collections (as reported by the Librarians)," described under individual universities, p. 62-75.

Public Archives of Canada. *Catalogue of pamphlets in the Public Archives of Canada*. Ottawa: Acland, 1931-32. 2 v.

Lists 10,072 items chronologically; v. 1, 1493-1877; v. 2, 1878-1931. Includes material published in and about Canada.

Queen's University Library. *Canadian pamphlets in the Douglas Library; copied from the shelf list*. Kingston, Ont., 1962. n.p.

Chronological arrangement, with Library of Congress classification.

Queen's University Library. *Canadiana in the possession of the Douglas Library, Queen's University*. Kingston, Ont. 1932. 85 p.

Lists books and pamphlets published in Canada or about Canada and by Canadian writers, 1698-1900. Titles for 1698-1850 in chronological order.

Queen's University Library. *A catalogue of Canadian manuscripts collected by Lorne Pierce and presented to Queen's University*. Toronto: Ryerson Press, 1946. 164 p.

P. 1-87, calendar of writings by and about William Bliss Carman; p. 91-154, "other Canadian authors."

Queen's University Library. *Catalogue of the McNicol collection of books on telegraphy, telephony and radio contained in the Douglas Library, Queen's University*. Kingston, Ont., 1942. 42 p.

Queen's University Library. *A checklist of India and Pakistan documents in the Queen's University Libraries (as of August 1966)*. Kingston, Ont., 1966. n.p.

Queen's University Library. *A checklist of works by and about John Buchan in the John Buchan collection, Queen's University*. Kingston, Ont.: The Library, 1958. 31 p.

Manuscript and published writings of John Buchan, whose personal library is at Queen's University.

Queen's University Library. *Hand list of theology in the Douglas Library, Queen's University*. Kingston, Ont., 1935. 139 p.

Classified arrangement.

Queen's University Library. *Interim catalogue of Canadian newspapers in the Douglas Library, Queen's University*. Kingston, Ont. 1964. 106 p.

Alphabetical by title, with detailed holdings.

Queen's University Library. *List of serials in the Library of the Faculty of Law . . . according to the arrangement on the shelves with inclusive holdings as of the beginning of January 1966*. Kingston, Ont., 1966. n.p.

Queen's University Library. *A list of United Nations publications in the Queen's University Libraries (as of December 31, 1962)*, comp. by George F. Henderson and Shih-Sheng Hu. Kingston, Ont.: Queen's University Faculty of Law, 1963. 68 p.

Arranged by agencies.

Queen's University Library. *A note on the manuscript collections in the Douglas Library, Queen's University*, by E. C. Kyte. Kingston, Ont., 1943. 26 p.

Brief descriptions of collections.

Queen's University Library. *Serials in Science and Engineering Libraries, Queen's University*. Kingston, Ont., 1964. 73 p.

Alphabetical list, with holdings.

Ricci, Seymour de. *Census of medieval and renaissance manuscripts in the United States and Canada*. N.Y.: Wilson, 1935-40. 3 v. *Supplement*. N.Y.: Bibliographical Society of America, 1962. 626 p.

Robinson, Hilda M. *A quantitative and qualitative evaluation of the resources of the Boreal Institute Library collection.* Edmonton, 1966. 102 p. Typed.

Detailed listing by types of material of an important Arctic collection.

Saskatchewan, University, Library. *Hand list of subject indexes & abstracting journals with some subject bibliographies in the Murray Memorial Library, University of Saskatchewan.* Saskatoon, 1965. 10 p.

Alphabetical and classified lists.

Saskatchewan, University, Library, Serials Dept. *Consolidated list of new periodical titles, 1965-66.* Saskatoon, 1966. 65 p.

Simon, Beatrice V. *Library support of medical education and research in Canada.* Ottawa: Association of Canadian Medical Colleges, 1964. 133 p.

Statistical summaries of medical library holdings of various types of material in 12 universities.

Simon Fraser University Library. *Serials.* Burnaby, B.C., 1966. 200 p.

Lists 3,004 serials currently received.

Sir George Williams College Library. *Bibliography of Canadiana, 1944,* comp. by Jean B. Crombie and Margaret A. Webb. Montreal, 1945. 322 p. *Supplement,* Montreal, 1946. 55 p.

Smith, Charles W. *Pacific Northwest Americana: a checklist of books and pamphlets relating to the history of the Pacific Northwest,* 3d ed. Portland: Oregon Historical Society, 1950. 381 p.

Includes holdings of 38 libraries in area, including five libraries in British Columbia.

Special Libraries Association, Montreal Chapter. *Union list of serials in libraries of Montreal and vicinity,* ed. by B. L. Anderson. Montreal: The Chapter, 1965. n.p.

Special Libraries Associations, Science-Technology Division, Pharmaceutical Section. *Union list of periodicals in pharmaceutical libraries.* N.Y.: The Association, 1952. 189 p.

Holdings of 25 U.S. and Canadian libraries listed.

Special Libraries Association, Toronto Chapter. *Directory of special libraries:Toronto and cities in Ontario west of Ottawa.* Toronto: The Chapter, 1965. n.p.

Contains 239 entries, with personnel index. Brief sketches of facilities.

Toronto Public Library. *A bibliography of Canadiana; being items in the Public Library . . . . relating to the early history and development of Canada.* Toronto: The Library, 1934. 828 p.

Author catalogue of 4,646 items for period 1534-1867. First supplement. Toronto: The Library, 1959. 333 p. Adds 1,640 entries.

Toronto Public Library. *The Canadian North West; a bibliography on sources of information in the Library in regard to the Hudson's Bay Company, the fur trade and the early history of the Canadian North West.* Toronto: The Library, 1931. 52 p.

Toronto Public Library. *A century of Ontario broadsides, 1793-1893; a catalogue of a typographic exhibition of posters and handbills from the Toronto Public Library's collections,* comp. by Edith G. Firth. Toronto: The Library, 1965. 20 p.

Toronto Public Library. *Early Toronto newspapers, 1793-1867,* ed. by Edith G. Firth. Toronto: Baxter Pub. Co., 1961. 32 p.

A catalogue.

Toronto Public Library. *Guide to serials currently received in the Toronto Public Library.* Toronto: The Library, 1966. 67 p.

Alphabetical list, with holdings.

Toronto Public Library. *Guide to the manuscript collection in the Toronto Public Libraries,* 2d ed., prep. by Donalda Putnam and Edith Firth. Toronto, 1954. 116 p.

Toronto Public Library. *J. Ross Robertson ornithological collection; a catalogue of the 713 bird pictures in the John Ross Robertson collection.* Toronto: The Library, 1919. 88 p.

Toronto Public Library. *Landmarks of Canada; a guide to the John Ross Robertson historical collection of 4,000 pictures in the Toronto Public Library.* Toronto: The Library, 1917-21. 2 v.

Toronto Public Library. *Map collection of the Toronto Reference Library.* Toronto: The Library, 1923.

Describes 1,300 maps from 1560 to 1923.

Toronto Public Library. *The North West Passage, 1534-1859; a catalogue of an exhibition of books and manuscripts in the Toronto Public Library,* comp. by Edith G. Firth. Toronto: Baxter Pub. Co., 1963. 28 p.

Toronto Public Library. *One hundred books since 1471; an exhibition of fine printing from the collections of the Toronto Public Library.* Toronto: The Library, 1967. 31 p.

From the Library's printing and press collection.

Toronto Public Library. *The Osborne collection of early children's books, 1566-1910; a catalogue,* ed. by Judith St. John. Toronto: The Library, 1958. 561 p. (Reprinted with minor corrections, 1966)

Lists and describes over 2,700 titles in the Toronto Public Library collection.

Toronto Public Library. *The Rebellion of 1837-38; a bibliographic list of items in the Library*. Toronto: The Library, 1924. 81 p.

Toronto Public Library. *Recording Toronto; a catalogue of about 300 selected pictures of early buildings and street scenes in the town of York and the city of Toronto from the John Ross Robertson historical collection and other picture collections of the Toronto Public Library*. Toronto: The Library, 1960. 36 p.

Toronto Public Library. *Toronto and early Canada; a catalogue of the Toronto and early Canada picture collection in the Toronto Public Library* (Landmarks of Canada, v. 3). Toronto: Baxter Pub. Co., 1964. 64 p.

Toronto, University, Dental Library. *The rare books collection of the Dental Library, University of Toronto, and the Harry R. Abbott Memorial Library,* comp. by Phyllis M. Smith. Toronto, 1966. 37 p.

A catalogue of publications descriptive of the collection.

Toronto, University, Library. *A bibliography of comedias sueltas in the University of Toronto Library*. Toronto: Univ. of Toronto Press, 1959. 149 p.

Spanish drama collection presented to Library.

Toronto, University, Library. *Catalogue of Italian plays, 1500-1700, in the Library of the University of Toronto,* comp. by Beatrice Corrigan. Toronto: Univ. of Toronto Press, 1961. 134 p. Supplement, *Renaissance News,* v. 16, No. 4, p. 298-307, published by Renaissance Society of America.

Toronto, University, Library, Circulation and Reference Dept. *A select bibliography of French language and literature,* comp. by Ina K. Wales, Toronto, 1959. 11 p.

Toronto, University, Library, Circulation and Reference Dept. *A select bibliography of German language and literature in the University of Toronto Library,* comp. by John L. Ball. Toronto: The Library, 1961. 24 p.

Toronto, University, Library. *Scientific serials currently received in the Library, University of Toronto,* comp. by Eileen E. Donner. Toronto: The Library, 1966. 119 p. Supplement, 1966. 34 p.

Alphabetical list; no holdings.

Tremaine, Marie. *A bibliography of Canadian imprints, 1751-1800.* Toronto: Univ. of Toronto Press, 1952. 705 p.

Lists books, magazines, pamphlets, newspapers, broadsides, and handbills, with locations in Canadian, U.S. and foreign libraries.

A union list of Catholic periodicals in Catholic college and seminary libraries in Michigan and Ontario. Windsor: Assumption University Library 1958. n.p.

Includes holdings of St. Basil Seminary in Toronto and Holy Redeemer College in Windsor.

Union list of scientific and technical periodicals in libraries of the Maritime Provinces and Newfoundland, ed. by Maurice P. Boone. Halifax, N.S.: Imperial Press, 1951. 63 p.

Records holdings of 26 libraries.

Union list of serials in libraries of the United States and Canada, 3d ed. N.Y.: Wilson, 1965. 5 v.

Locates files of 157,000 journals in U.S. and Canadian libraries; includes holdings of 58 Canadian libraries.

U.S. Air University Libraries. *Union list of foreign military periodicals.* Maxwell Air Force Base, Ala.: The Libraries, 1957. 72 p.

Union list of 356 titles in 30 U.S. and Canadian libraries.

Victoria University Library. *A bibliography of Canadian fiction (English),* by Lewis E. Horning and Lawrence J. Burpee. Toronto: Wm. Briggs, 1904. 82 p.

Includes biographical notes.

Victoria University Library. *A bibliography of Canadian poetry (English)* by C. C. James. Toronto: Wm. Briggs, 1899. 72 p.

Includes biographical sketches.

Victoria University Library. *Starr collection of Baxter prints.* Toronto: Ryerson Press, 1946. 26 p.

List of prints by George Baxter, "picture printer of the 19th century" in Victoria University Library, Toronto.

Ward, William S. *Index and finding list of serials published in the British Isles, 1789-1832.* Lexington: Univ. of Kentucky Press, 1953. 180 p.

Union list of serials giving holdings of 359 British, Canadian, and U.S. libraries.

Watters, Reginald Eyre. *A check list of Canadian literature and background materials, 1628-1950,* comp. for the Humanities Research Council of Canada. Toronto: Univ. of Toronto Press, 1959. 789 p.

Locates copies in various Canadian libraries, British Museum, Library of Congress, etc.

Wayne State University Libraries. *Newspaper resources of metropolitan Detroit libraries; a union list,* comp. by Howard A. Sullivan and Thelma Freides. Detroit: The Libraries, 1965. 46 p.

Includes holdings of University of Windsor Library.

Western Ontario, University, Library, Faculty of Medicine. *List of current serials*, comp. by Olga B. Bishop. London: The University, 1963. 23 p.

Holdings not shown.

Western Ontario, University, Library. *Guide to government publications and publications of international organizations*, 2d ed. London, Ont.: The Library, 1967. 25 p.

Western Ontario, University, Library. *Indexing and abstracting services*. London, Ont.: The Library, 1966. n.p.

Alphabetical arrangement; 204 entries.

Western Ontario, University, Library. *Periodicals list, non-medical*, 2d ed., comp. by R. A. Hoyle. London: The Library, 1966. 180 p.

Alphabetical list, with holdings.

Williams, Edwin E. *Resources of Canadian university libraries for research in the humanities and social sciences*. Ottawa: National Conference of Canadian Universities and Colleges, 1962. 87 p.

"The Research Collections" described by subjects, p. 23-50.

Windsor, University, Library. *Periodical and serial titles in the pure and applied sciences; a holdings list*, 4th ed. Windsor: The Library, 1966. 80 p.

Windsor, University, Library. *Periodical titles in the humanities and social sciences; a holdings list*. Windsor: The Library, 1966. 91 p.

Wing, Donald. *Short-title catalogue of books printed in England, Scotland, Ireland, Wales, and British America and of English books printed in other countries, 1641-1700*. N.Y.: Columbia Univ. Press, 1945. 3 v.

Includes Osler Library (McGill University).

Appendix B

CHECKLISTS OF REFERENCE BOOKS AND PERIODICALS

I

Study of Canadian College and University Libraries, 1966-67
Etude sur les bibliothèques de collège et d'université au Canada, 1966-67

Liste supplémentaire d'ouvrages de référence
Supplementary reference list

Bibliothèque — Library ______________________
Adresse — Address ______________________
Bibliothécaire — Librarian ______________________

La liste ci-dessous est un échantillon des ouvrages de référence que l'on peut trouver dans une bibliothèque d'université au Canada.

Elle se fonde sur des listes ou des compilations déjà faites par Mr. R. M. Hamilton (U.B.C. Library) et M. Réal Bosa (Université de Montréal, Ecole de bibliothéconomie). Le R.P. Paul-Emile Filion et M. Bernard Vinet ont modifié et augmenté ces listes en vue de l'étude actuelle.

La liste a été rédigée par le personnel de la bibliothèque de l'AUCC, mais il a fallu faire vite à cause du manque de temps et de personnel. Nous sollicitons donc votre indulgence à ce sujet.

Veuillez marquer d'un crochet les ouvrages que l'on peut trouver dans votre bibliothèque.

The following list is a sampling of reference works one might find in a Canadian academic library. It is based upon lists or compilations previously made by Mr. R. M. Hamilton (U.B.C. Library) and M. Réal Bosa (Université de Montréal, Ecole de Bibliothéconomie). Father Paul-Emile Filion and M. Bernard Vinet modified and supplemented these compilations for the present study.

The list has been edited by the staff of the AUCC library but pressure of time and shortage of staff dictated a quick editing. Your forbearance in this instance would be appreciated.

Please check those works to be found in your library.

Adams, C. F. *A reader's guide to the great religions.* Toronto, Collier-Macmillan, 1965.

L'Almanach du peuple. Montréal, Beauchemin, 1870- (annuel).

Anger, W. H. and Anger, H. D. *Digest of Canadian law.* Toronto, Canada Law Book, latest ed.

Armstrong, G. H. *The origin and meaning of place names in Canada.* Toronto, Macmillan, 1930.

Atlas international Larousse, politique et économique, Paris, Larousse.

Atlas Larousse classique. Paris, Larousse, 1964.

Association des éditeurs canadiens, *Catalogue de l'édition au Canada français, 1966-67.* Montréal, Conseil supérieur de livre, 1966.

Audet, F. J. et Malchelosse, G. *Pseudonymes canadiens.* Montréal, Ducharme, 1936.

Baillargeon, S. *Littérature canadienne-française.* 3e éd. ref. Montréal, Fides, 1961.

Bailly, René. *Dictionnaire des synonynes de la langue française.* Paris, Larousse, 1947.

Barbeau, C. M. *Folk-songs of old Quebec.* Ottawa, Queen's Printer, 1964.

Barbier, A.-A. *Dictionnaire des ouvrages anonymes.* Hildesheim, Olms, 1963.

Barraclough, E. M. C. *Flags of the world.* London, Warne (1953), 1965 rev.

Beauchesne, Arthur. *Rules and forms of the House of Commons of Canada* with annotations, comments and precedents. 4th ed. Toronto, Carswell, 1958.

Beaulieu, A., & Hamelin, J. *Catalogue des journaux du Québec 1764-1964.* Québec, Presses de l'Univ. Laval, 1966.

Bélisle, L. A. *Dictionnaire général de la langue française du Canada.* Québec, Bélisle, 1957.

Belle-Isle-J. Gérald, *Dictionnaire technique général anglais-français,* Québec, Bélisle, 1965.

Bénac, Henri. *Dictionnaire des synonymes.* Paris, Hachette, 1956.

Benezit, E. *Dictionnaire critique et documentaire des peintres et sculpteurs, dessinateurs et graveurs de tous les temps et de tous les pays.* Nouv. éd. Paris, Gründ, 1956-1960. 8v.

Béraud, Jean. *350 ans de théâtre au Canada français.* (Encycl. du Canada français). Montréal, Cercle du Livre de France, 1958.

Biblio, Paris, Hachette, 1933- (mensuel)

Biographies canadiennes françaises. Publiées par J. A. Fortin et Raphaël Ouimet. Montréal, l'Eclaireur, 1920-

Bloch, Oscar and Wartburg, W. Von. *Dictionnaire étymologique de la langue française*. Paris, PUF, 1964.

Boisdeffre, Pierre de. *Dictionnaire de littérature contemporaine, nouvelle* éd. Paris, éd. Universitaires, 1964.

Bottin administratif du Québec, Québec, Office d'Information et de Publicité, 1965.

Bourinot, Sir J. G. *Bourinot's Rules of order*, rev. by J. Gordon Dubroy. 2nd ed. Toronto, McClelland, 1963.

Brunet, M. *et al*. *Histoire du Canada par les textes*. Ed. rev. et augm. Montréal, Fides, 1963. 2v.

CCH Canadian Limited. *Canada income tax guide*.

CCH Canadian Limited. *Canadian labour law reports*.

CCH Canadian Limited. *Canadian tax reports*.

Canada. Bibliothèque du Parlement. *Répertoire des vedettes-matière. Subject headings used in the French catalogue*. Ottawa. Imprimeur de la Reine, 1963.

Canada. Bibliothèque Nationale. *Thèses canadiennes; une liste des thèses acceptées dans les universités canadiennes*, Ottawa, Bibliothèque nationale du Canada, 1953- or English edition.

Canada. Department of Agriculture. Plant Research Institute. *Edible and poisonous mushrooms of Canada*, by J. W. Groves. Ottawa, Queen's Printer, 1962.

Canada. Department of Forestry. *Native trees of Canada*. 6th ed. Ottawa, Queen's Printer, 1961. ou éd. en français *Arbres indigènes du Canada*.

Canada. Department of labour. *Provincial labour standards* — Ottawa, 1965. ou *Normes provinciales du travail*. Ottawa, 1966.

Canada. Department of Mines and Technical Surveys. *Atlas of Canada*. Ottawa, Queen's Printer, 1958. ou édition française. *Atlas du Canada*.

Canada. Department of Mines and Technical Surveys. *The boundaries of Canada, its provinces and territories* by N. L. Nicholson. Ottawa, Queen's Printer, 1964.

Canada. Department of Northern Affairs and National Resources. Forestry Branch. *Forest flora of Canada*, by G. C. Cunningham. Ottawa, Queen's Printer, 1958. (Bulletin No. 121) (Text in English and French)

Canada. Department of Northern Affairs and Natural Resources Forestry Branch. *Forest regions of Canada*, by S. S. Rowe. Ottawa, Queen's Printer, 1959. (Bulletin No. 123)

Canada. Department of Public Printing and Stationery. *Organization of the Government of Canada*. Ottawa, Queen's Printer, 1958- ou édition française. *Administration fédérale du Canada*.

Canada. Dominion Bureau of Statistics. *Canada yearbook,* v.1. 1905- Queen's Printer, 1906 ou édition française *Annuaire du Canada.*

Canada. National Gallery. *Catalogue of painting and sculpture,* ed. by R. H. Hubbard. Toronto, Univ. of Toronto Pr. 1958- .

Canada. National Museum. *The birds of Canada,* by W. E. Godfrey, Ottawa, Queen's Printer, 1966.

Canada. National Museum. *Folk-names of Canadian birds,* by W. L. McAtee. 2d ed. Ottawa, Queen's Printer, 1959. (Bulletin, no. 149.) Biological series, no. 51.

Canada. *Gazetteer of Canada.* Ottawa, Queen's Printer, 1952-

Canadian almanac and directory, Toronto, Copp Clark, 1847- annuel.

Canadian annual review. (Annual) Univ. of Toronto Press, 1960-

Canadian Broadcasting Corporation. *A Guide to the pronunciation of Canadian place names.* Rev. ed. Toronto, C.B.C., 1959.

Canadian catalogue of books published in Canada, about Canada, as well as those written by Canadians, with the imprint 1921-1949 (consolidated English language reprint edition) with cumulated author index. Toronto. Toronto Public Libraries, 1959. 2v.

The Canadian dictionary; French-English, English-French, prepared at the Lexicographic Research-Centre, University of Montreal. Concise ed. ed. by J. P. Vinay, P. Daviault, H. Alexander. Toronto, McClelland, c1962.

Canadian education index. / Répertoire canadien sur l'éducation. Ottawa, Canadian Council for Research in Education. v.1- 1965- quarterly.

Canadian periodical index / Index périodiques canadiens, 1948- Ottawa, Canadian Library Assoc., 1949-

Canadian Library Association. *A list of Canadian subject headings.* (Occasional Paper no. 65) C.L.A. 1966.

Canadian market data, v.1.- 1963- Toronto, Maclean-Hunter, 1963-

Canadian Music Library Association. *A bio-bibliographical finding list of Canadian musicians and those who have contributed to music in Canada.* Ottawa, 1961.

Canadian newspaper directory . . . A complete list of newspapers and periodicals published in the Dominion of Canada and Newfoundland, with full particulars . . . 35th ed. Montreal, McKim.

Canadian parliamentary guide. Ottawa, Normandin, 1912- (annual)

Canadian postal guide. Ottawa, Queen's Printer, ou édition française.

Canadian universities and colleges / Universités et collèges canadiens. Ottawa, 1948- Association of Universities and Colleges of Canada. latest ed. 1966 / dernière éd. 1966.

Canadian who's who, a handbook of Canadian biography of living characters. Toronto, Trans-Canada Press, 1910-

Canadiana, 1950- Ottawa, National Library. 1951-

Catholic periodical index. N.Y., Published for the Catholic Library Assoc. by Wilson, 1939-

Clartés. Encyclopédie du présent. Paris, Ed. techniques, 1948- (16v. parus.)

Commonwealth universities yearbook. Lond. Association of Commonwealth Universities, (annual)

Concordance des Saintes Ecritures d'après les versions Segond et Synodale. Lausanne, Société biblique auxiliaire du Canton de Vaud, 1954.

Conseil de la vie française en Amérique. *Le bottin des sociétés patriotiques, 1962-* Québec, Editions Ferland, 1963- (annuel)

Coston, H. *Dictionnaire des pseudonymes,* nouv. éd corr. Paris, Librairie française, 1965.

Crankshaw, J. ed. *Criminal code of Canada; a commentary on the criminal law of Canada.* 7th ed. Toronto, Carswell, 1959.

A critical bibliography of French literature. Ed. by D. C. Cabeen. Syracuse Univ. Press, 1947- (4) v. parus.

Deak, E. *Dictionnaire d'américanismes.* 3e éd. augm. Paris, Ed. du Dauphin, 1962.

Desrosiers, L.-P. *Iroquoisie.* vol. I. Montréal, 1947. Institut d'Histoire de l'Amérique Française (Fides)

Dictionnaire biographique des auteurs de tous les temps et de tous les pays. Sous la dir. de R. Laffont et V. Bompiani. Paris, S.E.D.E., 1957-1958. 2v.

Dictionnaire de l'Académie française. 8e éd. Paris, Hachette, 1931-1935. 2v.

Dictionnaire des oeuvres de tous les temps et de tous les pays. Sous la dir. de R. Laffont et V. Bompiani. Paris, S.E.D.E., 1952-1955. 5v.

Dictionnaire du cinéma. Paris, Seghers, 1962.

Dictionnaire encyclopédique Quillet. 6v. Paris. Quillet, 1962-

Dictionnaire militaire anglais-français, français-anglais. Ottawa, Imprimeur du Roi, 1945.

Dictionnaire moderne français-anglais, anglais-français, par M.-M. Dubois avec la collab. de C. Cestre et autres. Paris, Larousse, 1960.

Dictionnaire national des canadiens français, 1608-1760; Montréal, Institut généalogique Drouin (c1958). 3 vol.

Dictionnaire Quillet de la langue française. Paris, Quillet, 1959. 3v.

Dictionary of Canadian biography. vol. I. (1000-1700) Toronto, Univ. of Toronto Press, 1966, ou édition française, Presses de l'Univ. Laval, 1966.

Dionne, C. E. *Les mammifères de la province de Québec,* Dussault et Proulx, 1902.

Dionne, C. E. *Les oiseaux de la province de Québec.* Québec, Dussault et Proulx, 1906.

Dionne, N. E. *Inventaire chronologique des livres, brochures, journaux et revues.* 5e éd. Québec, 1905-1912. 4v. & suppl.

Directory of business, trade and professional associations in Canada. Montréal, Canadian Business, 1959-

Drolet, Antonio. *Bibliographie du roman canadien-français, 1900-1950.* Québec, P.U.L., 1955.

Dupuis, H. *Dictionnaire des synonymes et antonymes.* Montréal, Fides, 1962.

Encyclopedia Canadiana. Ottawa, Canadiana, 1966 ed. (Centennial edition)

Encyclopédie française. Paris, 1933-1939, 1953-1959. 20v.

Encyclopédie universelle (Marabout université), Verviers, Gérard, 1961-1964. 8 vol.

Europa yearbook 1966. London, Europa Publ. 1966. 2v.

Financial Post. *Directory of directors.* Toronto, Maclean-Hunter, 1931-

Financial Post. *Survey of industrials,* 1st- 1927- annual. Toronto, Maclean-Hunter, recent edition.

Financial Post. *Survey of investment funds* 1st- 1962- (annual) Toronto, Maclean-Hunter, 1962- recent edition.

Financial Post. *Survey of mines,* 1926- Toronto, Maclean-Hunter, 1926- (annual)

Financial Post. *Survey of oils.* Toronto, Maclean-Hunter, 1929- (annual)

Foster, A. H. and Grierson, A. *High days and holidays in Canada.* 2n ed. Toronto, Ryerson, 1956.

Fouché, P. *Traité de prononciation française.* 2e éd. Paris, Klincksieck, 1959.

Fraser's Canadian trade directory, 1912- Montréal, Fraser's Trade Directories, 1912-

Freeman, W. *Dictionary of fictional characters.* London, Dent. 1963.

Gagnon, Philéas. *Essai de bibliographie canadienne*. Québec, l'auteur, 1895-1913. 2v.

Garigue, P. *A bibliographical introduction to the study of French Canada*. Montreal, McGill University, 1956.

Genest, E. *Dictionnaire des citations françaises*. Paris, Nathan.

Glossaire du parler français au Canada. Préparé par la Société du Parler français au Canada. Québec, L'Action sociale, 1930.

Goggio, E., Corrigan, B., Parker, J. H. *A bibliography of Canadian cultural periodicals (English and French from colonial times to 1950) in Canadian libraries*. Toronto, 1955.

Grand Larousse encyclopédique. 10 vol. Paris, Larousse, 1960-1965.

Grévisse, M. *Le bon usage: grammaire française avec des remarques sur la langue française d'aujourd'hui*. 7e éd. rev. Paris, Geuthner, 1961.

Haight, W. R. *Canadian catalogue of books, 1791-1897*. Toronto, the author, 1896-1904. 3v. Reprint, London, Pordes, 1958. 1v.

Hamilton, R. M., comp. *Canadian book-prices current*. Toronto, McClelland, 1957- 3v.

Hamilton, R. M. *Canadian quotations and phrases, literary and historical*. Toronto, McClelland, 1952.

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II

Study of Canadian College and University Libraries/Etude sur les Bibliothèques de Collège et d'université, 1966-1967

Supplementary periodicals checklist/Liste de contrôle supplémentaire de périodiques

(Please check this list for your current subscriptions)
(Veuillez marquer d'un crochet dans cette liste, les abonnements courants de votre bibliothèque).

Library/Bibliothèque ______________________

Librarian/Bibliothécaire ______________________

Action nationale.
Actualité économique.
Alberta historical review.
Alphabet.
Annales — Economie, sociétés, civilisations.
Architecture-bâtiment-construction.
Archives de philosophie.
Arctic.
Arts et traditions populaires.
Association canadienne des bibliothécaires de langue française bulletin.
Atlantic advocate.
Beaver.
Bible et vie chrétienne.
British Columbia historical quarterly.
British Columbia library quarterly.
Bulletin de l'association Guillaume Budé.
Business quarterly.
C. I. L. oval.
Cahiers de géographie de Québec.
Canadian tax journal.
Canadian welfare.
Catéchèse.
Cinéma 66.
Cité libre.
Collège et famille.
Community planning review.
Commerce.
Continuous learning.
Courrier de l'Unesco.
Croissance des jeunes nations.
Culture.
Cahiers du cinéma.
The Canadian architect.
Canadian art.
Canadian Audubon.
Canadian author & bookman.
Canadian aviation.
Canadian banker.

Canadian business.
Canadian chartered accountant.
Canadian education and research digest.
Canadian forum.
Canadian historical review.
Canadian labour.
Canadian library.
Canadian literature.
Canadian personnel and industrial relations journal.
Canadian plastics.
Canadian poetry.
Canadian public administration.
Dalhousie review.
Delta.
Economic annalist.
Education musicale.
Esprit.
Etudes.
Etudes classiques.
Etudes françaises.
Executive.
External affairs.
Fiddlehead.
Financial post.
Foreign trade.
Français moderne.
Geographical bulletin.
Habitat.
Historia.
Industrial Canada.
Imperial oil.
Information (L') d'histoire de l'art.
Information géographique.
Information littéraire.
Information scientifique.
International journal.
Jeune scientifique.
Journal de psychologie normale et pathologique.
Labour gazette.
Laval théologique et philosophique.
Liberté.
Maclean's magazine.
Le magazine Maclean.
Maintenant.
Monetary times.
Montrealer.
Newfoundland quarterly.
North.
Nouvelle revue française.
Oeil.
Office administration.
Ontario history.
Ontario library.
Paris-match.
Pédagogie.
Performing arts.
Prospectives.
Queen's quarterly.
Recherches sociographiques.
Relations.
Revue d'économie politique.
Revue de géographie de Montréal.
Revue d'histoire de l'Amérique française.
Revue d'histoire littéraire de la France.
Revue de l'université Laval.
Revue de l'université d'Ottawa.
Revue de l'université de Sherbrooke.
Revue de littérature comparée.
Revue des deux mondes.
Revue des sciences philosophiques et théologiques.
Revue française de science politique.
Revue française de sociologie.
Revue historique.
Revue international des sciences sociales.

Revue philosophique de Louvain
Relations industrielles.
Rod and gun.
Royal Architectural Institute of
  Canada journal.
Royal Society of Canada
  transactions.
Saskatchewan history.
Saturday night.
Sciences et avenir.
Sciences et vie.
Séquences.
Table ronde.
Tamarack review.
Temps modernes (Les).
Unesco courier.
University of Toronto quarterly.
Vie des arts.
Vie et langage.
Western business and industry.
World affairs.

III

Study of Canadian College and University Libraries, 1966-67

Etude sur les bibliothèques de collège et d'université au Canada, 1966-67

Liste supplémentaire de contrôle de périodiques français
Supplementary list of French periodicals

Bibliothèque — Library ________________________

Adresse — Address ________________________

Bibliothécaire — Librarian ________________________

Les listes V-a (établie d'après le Social Sciences and Humanities Index) et V-b (d'après le Canadian Index et l'Index Analytique de l'Université Laval) ne signalent qu'un nombre restreint de revues de langue française.

On doit considérer la présente liste, établie par M. Bernard Vinet et le R. P. Paul-Emile Filion, S. J., comme un outil d'échantillonnage des collections, non pas comme une liste normative.

Veuillez marquer d'un crochet les abonnements courants de votre bibliothèque.

Lists V-a ("Social Sciences and Humanities Index") and V-b (compiled from "Canadian Index" and the "Index Analytique") do not include a number of journals in the French language, which might be con-

sidered basic to some Canadian academic libraries. The following list will be of most importance to libraries in French language institutions but will be of interest to others with significant holdings of French language periodicals.

This list, compiled by Mr. Bernard Vinet and Rev. Paul-Emile Filion, S.J., is but a tool for sampling collections, not a final guide for selection.

Please check for current subscriptions to these journals.

Actà electronica.
Annales, économies, sociétés, civilisations.
Annales de chimie.
Annales de géographie.
Annales de géophysique.
Annales de l'Université de Paris.
Annales de limnologie.
Annales de paléontologie.
Annales de physique.
Annales historiques de la révolution française.
Annales scientifiques de l'Ecole normale supérieure.
Année biologique.
Année dans le monde.
Année philologique.
Année politique
Année psychologique.
Anthologie du cinéma.
Anthropologica. (Ottawa).
Anthropologie, (CNRS).
Antiquité classique.
Archives de sociologie des religions.
Archives des lettres canadiennes (irrég).
Archives internationales d'histoire des sciences.
Archivum.
Art de France (annuel).
Atomes.
Avant-scène (Cinéma).
Avant-scène (Théâtre).
Bibliographie de la philosophie.
Bibliographie des sciences et de l'industrie.
Bibliographie pédagogique.
Bibliographie sélective des publications officielles françaises
Bibliographie sur l'enseignement supérieur.
Bibliothèque d'humanisme et de renaissance.
Bulletin analytique de documentation politique économique et sociale.
Bulletin critique du livre français
Bulletin de l'ACBLF.
Bulletin de l'Association canadienne des professeurs d'universités.
Bulletin de l'Association internationales des universités.
Bulletin de l'Unesco à intention des bibliothèques.
Bulletin de la Société chimique de France.
Bulletin de la Société française de philosophie.
Bulletin de psychologie.
Bulletin des bibliothèques de France.
Bulletin des sciences mathématiques.

Bulletin du livre.
Bulletin hispanique.
Bulletin monumental.
Bulletin signalétiques, sections 1-11, mathématiques, physique, chimie, géologie.
Bulletin signalétique, sections 12-18, sciences biologiques.
Bulletin signalétiques, sections 19-24, sciences humaines.
Cahiers d'études africaines.
Cahiers d'histoire.
Cahiers d'histoire mondiale.
Cahiers d'outre-mer.
Cahiers de civilisation médiévale.
Cahiers de droit (Laval).
Cahiers de l'Académie canadienne française. (Approx. annuel).
Cahiers de l'Association internationale des études françaises.
Cahiers de l'Institut d'Histoire (U. Laval). (Irrég.).
Cahiers de la Société historique acadienne.
Cahiers de lexicologie.
Cahiers de physique.
Cahiers des dix. (Annuel). 30 vols.
Cahiers des explorateurs.
Cahiers du monde russe et soviétique.
Cahiers internationaux de sociologie.
Canadian journal of psychology— (Revue canadianne de psychologie).
Catalogue mensuel des traductions, effectuées dans les services et centres français de documentation.
Chimie analytique.
Chimie et industrie.
Chronique sociale de France.
Cimaise.
Cinéma.
Connaissance des arts.
Critique.
Culture vivante.
Devoir: l'index mensuel et cumulation annuelle, 1966-
Dialogue.
Diogène.
Dix-septième siècle.
Documentation économique.
Documentation politique internationale.
Documents — Revue des questions allemandes.
Economie et humanisme.
Energie nucléaire.
Etudes anglaises.
Etudes cinématographiques.
Etudes germaniques.
Europe.
Figaro littéraire.
Films et documents.
Le Français dans le monde.
French VII bibliography.
Le géographe canadien.
L'homme.
Index analytique. (Québec). (Laval).
Information historique.
Informations scientifiques françaises.
Instruments et laboratoires.
Intermédiaire des chercheurs et des curieux.
Jardin des arts.
Journal de chimie, physique et de physico-chimie biologique.
Journal de mathématiques pures et appliquées.
Journal de physique et de radium.

Journal de psychologie normale et pédagogique.
La justice dans le monde.
Kyklos.
Les langues modernes.
Latomus.
Les livres. Bulletin bibliographique mensuel.
Les livres de l'année.
Livres de France.
Livres et lectures.
Livres et revues d'Italie.
Lumen vitae.
Mammalia.
Le monde. (Edition hebdomadaire).
Le mouvement social.
Le Moyen-Age.
La nef.
Notes bibliographiques.
Nouveaux livres scientifiques et industriels.
Les nouvelles littéraires
Nucléus.
Objectif.
Onde électrique.
La pensée.
Physiologie végétale.
Poésie — Revue des poètes canadiens-français.
Poésie vivante.
Points et contrepoints.
Positif.
Preuves.
Le progrès scientifique.
Psychologie canadienne (Canadian psychologist).
Réalités scientifiques et techniques françaises.
La Recherche spatiale.
Repères.
Répertoire bibliographique de la philosophie.
Revue analytique de l'éducation Education abstracts. (Trimestriel).
Revue canadienne de sociologie et d'anthropologie.
Revue d'esthétique.
Revue d'études canadiennes (Trent Univ.).
Revue d'histoire économique et sociale.
Revue d'histoire de la 2e guerre mondiale.
Revue d'histoire des sciences.
Revue d'histoire du théâtre.
Revue d'histoire moderne et contemporaine.
Revue de chimie minérale.
Revue de cytologie et de biologie végétales.
Revue de géographie physique et de géologie dynamique.
Revue de l'AUPELF.
Revue de l'enseignement supérieur.
Revue de l'histoire des religions.
Revue de musicologie.
Revue de la psychologie des peuples.
Revue de mathématiques spéciales.
Revue de métaphysique et de morale.
Revue de Paris.
Revue de philologie, de littérature et d'histoire ancienne.
Revue de statistique appliquée.
Revue de synthèse.
Revue des cercles d'études d'Angers.

Revue des études anciennes.
Revue des études grecques.
Revue des études latines.
Revue des langues vivantes.
Revue des questions scientifiques.
Revue des sciences humaines.
Revue des sciences philosophiques et théologiques.
Revue du Moyen-Age latin.
Revue du son.
Revue économique.
Revue économique (Moncton, N.B.)
Revue française du traitement de l'information.
Revue internationale de pédagogie.
Revue internationale de philosophie.
Revue internationale du travail.
Revue internationale Teilhard de Chardin.
Revue philosophique de la France et de l'étranger.
Revue thomiste.
Romania.
Das Schweizer buch. Le livre suisse.
Scène au Canada (La).
Science, progrès, nature.
Sciences (Hermann).
Sciences de la terre.
Sciences ecclésiastiques.
Sciences et industries spatiales.
Sciences et l'enseignement des sciences.
Service social (Québec).
Signes du temps.
Sociologie contemporaine.
Sociologie du travail.
La technique moderne.
Tel quel.
Théâtre dans le monde.
Tiers-monde.
Travail humain.
U.R.S.S. et les pays de l'Est.
Vie des bêtes.
Vie et milieu.
Vie française (Québec).
Vie urbaine.
Vient de paraître (Montréal).